



OHM Remediation
Services Corp.
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Former NTC Bainbridge, Port Deposit, MD
Contract N62470-93-D-3032 D.O. # 137

Site Removal Actions
Project No. 919568

Date: 12-Nov-99
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TO: Frank Zepka [Navy], Mary Cooke [U.S. EPA Region III], Bill Schmidt [MDE], Kim LeMaster [MDE]
FROM: Larry Stearns
COPIES: Project File
SUBJECT: Transmittal of Project Close-Out Reports:
 Volume 7: Lead Soil Impacted Sites:
 Buildings 689 and 1054: Water Towers
 Building 707: Paint Storage Locker
 Buildings 204, 304, and 404: Small Arms Ranges

Enclosed are the following copies of the above referenced document:

- U.S. EPA – Region III: 3 copies of each
- MDE: 2 copies of each
- Navy: 5 copies of each

Please forward any comments to Mr. Frank Zepka at the Navy.



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**CONTRACTOR CLOSE-OUT REPORT
SITE CLEAN-UP AND REMOVAL ACTIONS
FORMER NAVAL TRAINING CENTER - BAINBRIDGE
PORT DEPOSIT, MARYLAND**

**VOLUME 7
LEAD SOIL IMPACTED SITES:
BUILDINGS 689 AND 1054: WATER TOWERS
BUILDING 707: PAINT STORAGE LOCKER
BUILDINGS 204, 304, AND 404: SMALL ARMS RANGES**

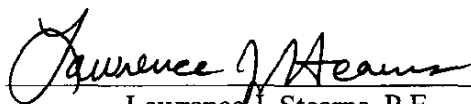
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OHM Project 919568

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LIST OF ACRONYMS

<u>Acronym</u>	<u>Title</u>
cyd	cubic yard
EPA	U.S. Environmental Protection Agency – Region III
MDE	Maryland Department of the Environment
mg/kg	milligram per kilogram [parts per million]
NTCB	Former Naval Training Center Bainbridge
OHM	OHM Remediation Services Corporation, a subsidiary of The IT Group
ppm	parts per million [micrograms per gram]
SW-846	U.S.EPA “Test Methods for Evaluating Solid Waste”, 3 rd ed., July 1994
TAL	Target analyte list
TCLP	Toxicity Characteristic Leaching Procedure
XRF	X-ray Fluorescence

1.0 INTRODUCTION

OHM Remediation Services Corp. [OHM] was contracted by the Navy to perform environmental remediation at the former Naval Training Center Bainbridge [NTCB] near Port Deposit, Maryland. This report documents a portion of the work performed on this project by OHM under federal contract N62470-93-D-3032, Delivery Order No. 137 issued 5 February 1997. Specifically, this report addresses the remediation at Buildings 689 and 1054 (Water Towers), Building 707 (Paint Storage Locker) and Buildings 204, 304 and 404 (Small Arms Ranges). Refer to drawing RD-01 for the building locations.

1.1 PROJECT BACKGROUND

Design and construction of NTCB began in 1942 initially building from the property of the former Tome Institute School. NTCB served as a boot camp for Navy recruits during World War II and the Korean War and was permanently closed in 1976. The facility encompasses approximately 1,250 acres and consists of roads, drill fields, and about 60 remaining buildings. Most buildings and structures within NTCB were demolished during the last 10 years. Since deactivation, NTCB has become extensively overgrown and has been little used in the past two decades.

The U.S. Department of the Navy currently owns NTCB, but transfer of ownership to the State of Maryland is in progress pending resolution of various environmental and other issues. State and local agencies are planning to develop NTCB, possibly for commercial and residential use. The remediation discussed in this report is part of a larger environmental remediation effort by the Navy at NTCB.

1.2 GENERAL SCOPE OF WORK

The general scope of work for the remediation at the lead soil impacted sites involved removing the upper 6 to 18-inches of lead impacted soils for disposal as non-hazardous and hazardous waste at Buildings 689 and 1054, removing the upper 18 to 30-inches of lead impacted soils for disposal as non-hazardous and hazardous waste at Building 707, removal of the upper 12 to 36-inches of lead impacted soils for disposal as non-hazardous and hazardous waste at Buildings 204, 304 and 404 and restoring the areas after remediation.

During the execution of this work, OHM used the following subcontractors for waste disposal or analytical services.

- Non-hazardous solid waste disposal – BFI Conestoga Landfill – New Morgan Landfill Co., Inc., P.O. Box 128, Mineview Drive Extension, Morgantown, Pennsylvania 15543 (610-286-6844).
- Hazardous solid waste disposal – Capitol Environmental – Mill Service, Inc., R.D. 1 Box 135A, Yukon, PA 15698 (724-722-3500).
- Laboratory analytical work – Analytical Laboratory Services, Inc., 34 Dogwood Lane, Middletown, PA 17057 (717-944-1430).
- Laboratory analytical work - Gascoyne Laboratories, Inc., 2101 Van Deman Street, Baltimore, Maryland 21224 (410-633-1800).

- Laboratory analytical work – Accutest Laboratories, Inc., 4405 Vineland Road, Suite C-15, Orlando, Florida 32811 (407-425-6700).

1.3 PROJECT CLEANUP LEVELS

The project cleanup levels listed in Table 1 were established by the Navy with the concurrence of the EPA and MDE. Remediation continued until all of the confirmation analyses gave results that did not exceed the cleanup level(s) for the particular chemical(s) of concern at a specific location. Although laboratory analyses other than those listed in Table 1 may have been performed and may be reported in this document, the Table 1 values were the only cleanup levels specifically established for NTCB.

For the Lead Impacted Soil Sites, the chemical of concern for cleanup level was:

- Lead

Table 1: Project Cleanup Levels Applied at Various NTCB Locations

Chemical of Concern	Cleanup Level	Units	Units	Intended Matrix
Total Petroleum Hydrocarbons	100	mg/kg	ppm	Soil
DDT	4.3	mg/kg	ppm	Soil
DDE	16.3	mg/kg	ppm	Soil
DDD	23.1	mg/kg	ppm	Soil
Alpha Chlordane	4.1	mg/kg	ppm	Soil
Gamma Chlordane	4.1	mg/kg	ppm	Soil
Heptachlor Epoxide	0.4	mg/kg	ppm	Soil
Antimony	27	mg/kg	ppm	Soil
Lead	400	mg/kg	ppm	Soil
Benzo (a) pyrene	2.0	mg/kg	ppm	Soil
Total PCB	10	mg/kg	ppm	Soil
Total PCB	10	mg/kg	ppm	Concrete
Total PCB	10	mg/kg	ppm	Non-porous Surfaces
Total PCB	50	mg/kg	ppm	Encapsulated Concrete

2.0 SUMMARY OF WORK PERFORMED

The following sections summarize the remediation work performed for the site cleanup action at Buildings 689 and 1054 (Water Towers), Building 707 (Paint Storage Locker) and Buildings 204, 304 and 404 (Small Arms Ranges). The locations of these lead impacted sites are shown on drawing RD-01.

2.1 LOCATION INVESTIGATION AND INITIAL REMOVALS

Except for Buildings 689 and 1054 [Water Towers], surface soil samples were collected and field screened for lead at all lead impacted sites. In the field, a TN Technologies Spectrace 9000 XRF Analyzer was used to delineate the approximate horizontal and vertical extent of lead impacted soils at Buildings 104, 204, 304, 404, and 707. At Buildings 689 and 1054, the lead impacted soils were delineated by using off-site laboratory analyses for Total Lead by Method 6010.

Building 104 did not require remediation as none of the 24 soil samples had XRF lead concentrations exceeding the Table 1 cleanup levels. However, the following gives the approximate extent of the lead impacted soil locations that eventually became remediated:

Building 689	7,100 sft from 6 to 18-inches deep,
Building 1054	2,050 sft from 6 to 12-inches deep,
Building 707	3,200 sft from 18 to 30-inches deep,
Building 204	67,600 sft from 12 to 36-inches deep,
Building 304	6,000 sft at 24-inches deep,
Building 404	28,600 sft from 12 to 36-inches deep.

2.2 REMOVAL ACTION

The following summarizes the lead impacted soil removal actions performed during the site remediation. During this work, close communication was maintained with the Navy, EPA, and MDE representatives regarding the remediation progress and decisions about confirmation analytics.

2.2.1 Water Towers – Buildings 689 and 1054

Prior to excavation activities, several soil samples were collected from each location to approximate the area for remediation and prepare waste characteristic profiles for disposal. The soils were initially excavated in 6-inch lifts and the removed soils were staged on plastic tarps prior to load-out for off-site disposal. Confirmation samples were collected for laboratory analysis of Total Lead (Method 6010) from 0 to 6-inches below grade. Additional excavation was performed in 6-inch lifts if the confirmation sample results exceeded the Table 1 cleanup levels.

Drawing RD-07 shows the final excavation depths and areas. Approximately 449.59 tons of hazardous lead impacted soil from Water Tower 689 was disposed of off-base at a properly permitted landfill facility. Approximately 46 tons of non-hazardous lead impacted soil from Water Tower 1054 was disposed of off-base at a properly permitted landfill facility.

SUMMARY OF WORK PERFORMED

2.2.2 Buildings 204, 304, 404 and 707

Prior to the excavation activities at these locations, a series of soil samples was collected in an effort to establish a correlation between Total Lead (Method 6010), Toxicity Characteristic Leaching Procedure (TCLP) for Lead (Method 1311/6010), and field XRF total lead testing. The generated curve was used to guide segregation of removed soils into piles of non-hazardous versus hazardous wastes for disposal.

At these four building locations, lead impacted surface soils were excavated based on the field XRF screening results. If XRF screening results for the grid samples were greater than 400 ppm lead, then additional excavation was performed in 6 to 12-inch lifts. When the Table 1 cleanup criteria level of 400 ppm lead was attained in the grid samples, then confirmation soil samples were collected for field screening by XRF and submittal to the laboratory for analysis.

Using the correlation data of Total Lead verses TCLP Lead from the laboratory, the lead impacted soil material (defined as greater than 400 ppm Total Lead) from each building location was selectively excavated to be combined with material from grids with similar lead levels based on the XRF Total Lead investigation. The soils were segregated into approximately 100 cyd piles which resulted in the formation of 70 lead impacted soil piles [10 piles from Building 707; 5 piles from Building 304; 19 piles from Building 404; and 36 piles from Building 204].

During the remediation of these four building locations, approximately 5,259.61 tons of hazardous lead impacted soil was disposed of off-base at a properly permitted landfill facility. In addition, approximately 5,079.98 tons of non-hazardous lead impacted soil was disposed of off-base at a properly permitted landfill facility.

2.3 SITE RESTORATION

All excavations deeper than approximately 1-foot deep were backfilled with clean, sandy soil from the Old Landfill cap stripping work. The edges of excavations were smoothed, and the areas were made safe and graded to minimize surface water collection. All disturbed areas were hydroseeded with a grass seed mixture and mulched with chopped straw.

3.0 CLEANUP CONFIRMATION

The following discussion summarizes the confirmation analyses that represent the lead impacted sites, Buildings 689 and 1054 (Water Towers), Building 707 (Paint Storage Locker) and Buildings 204, 304 and 404 (Small Arms Ranges) at the completion of remediation. Drawing RD-07 shows the sample locations.

3.1 CONFIRMATION APPROACH

This discussion is a synopsis of the approach to confirmation sampling and analyses that was presented in the OHM Work Plans: Addendum No. 2 dated 22-Dec-98, Addendum No. 3 dated 22-Jun-99 and Addendum No. 4 dated 10-Sep-99.

3.1.1 Water Towers – Buildings 689 and 1054

For the surface soil excavations at Buildings 689 and 1054, post excavation confirmation sampling was performed by the off-site laboratory. A circular, 10-foot wide ring, grid system was established around each of the previously removed water towers. Composite samples were collected from surface to a depth of 6-inches within each quadrant and sent to the laboratory for confirmation testing by Total Lead, SW846, Method 6010. If lead concentrations exceeded the action level of 400 ppm, additional excavations of 6-inches deep were performed followed by additional sampling.

3.1.2 Buildings 204, 304, 404 and 707

For all surface soil excavations at Buildings 204, 304, 404 and 707, post excavation field screening for lead was performed using the TN Technologies, Spectrace 9000 XRF Analyzer. Soil samples were collected and tested from sampling block areas (approximately 50' x 50' grid blocks) that were established from previous field XRF investigation.

The field screening results were then used to determine if additional excavation was needed or if samples should be collected for laboratory confirmation analyses. The following sample log lists the confirmation samples processed for each of the lead impacted sites:

Table 2: Sample Log for Buildings 204, 304, 404, 689, 707 and 1054

BUILDING	CONFIRMATION SAMPLE LEFT IN PLACE	LABORATORY ANALYTICAL	BUILDING	CONFIRMATION SAMPLE LEFT IN PLACE	LABORATORY ANALYTICAL
707	707-276C	Total Lead, TAL Metals	204	204-368C1	Total Lead
	707-278C	Total Lead, TAL Metals		204-559C	Total Lead
	707-262C	Total Lead		204-374C	Total Lead
	707-46C	Total Lead, TAL Metals		204-411C	Total Lead
	707-98C	Total Lead		204-484C	Total Lead
	707-155C	Total Lead		204-154C	Total Lead
	707-134C	Total Lead, TAL Metals		204-136C	Total Lead
	707-01C	Total Lead, TAL Metals		204-390C	Total Lead
	707-177W	None, XRF Screened		204-25C	Total Lead
	707-188W	None, XRF Screened		204-159C	Total Lead
	707-79W	None, XRF Screened		204-291C	Total Lead, TAL Metals
	707-37W	None, XRF Screened		204-442C	Total Lead
	707-285W	None, XRF Screened		204-299C	Total Lead
	707-107W	None, XRF Screened		204-80C	Total Lead, TAL Metals
	707-170W	None, XRF Screened		204-60C	Total Lead
	707-161W	None, XRF Screened		204-331C1	Total Lead
	707-69W	None, XRF Screened		204-381C	Total Lead

BUILDING	CONFIRMATION SAMPLE LEFT IN PLACE	LABORATORY ANALYTICAL	BUILDING	CONFIRMATION SAMPLE LEFT IN PLACE	LABORATORY ANALYTICAL
707	707-263W	None, XRF Screened	204	204-35C2	Total Lead
	707-204W	None, XRF Screened		204-338C1	Total Lead
	707-224W	None, XRF Screened		204-164C	Total Lead
	707-275W	None, XRF Screened		204-96C	Total Lead
	707-294W	None, XRF Screened		204-515C	Total Lead
	707-208W	None, XRF Screened		204-423C	Total Lead
304	304-09C	Total Lead, TAL Metals	204	204-400C	Total Lead
	304-14C	Total Lead, TAL Metals		204-324C1	Total Lead, TAL Metals
	304-119C	Total Lead, TAL Metals		204-320C	Total Lead, TAL Metals
	304-34C	Total Lead, TAL Metals		204-548C	Total Lead
	304-37C	Total Lead, TAL Metals		204-558C1	Total Lead, TAL Metals
	304-17W	None, XRF Screened		204-554C	Total Lead
	304-74W	None, XRF Screened		204-473W	None, XRF Screened
	304-50W	None, XRF Screened		204-487W	None, XRF Screened
	304-69W	None, XRF Screened		204-492W	None, XRF Screened
	304-79W	None, XRF Screened		204-510W	None, XRF Screened
	304-97W	None, XRF Screened		204-513W	None, XRF Screened
	304-92W	None, XRF Screened		204-522W	None, XRF Screened
	304-22W	None, XRF Screened		204-520W	None, XRF Screened
	304-113W	None, XRF Screened		204-194W	None, XRF Screened
404	404-183C1	Total Lead		204-213W	None, XRF Screened
	404-197C	Total Lead, TAL Metals		204-191W	None, XRF Screened
	404-144C	Total Lead		204-28W	None, XRF Screened
	404-133C	Total Lead		204-39W	None, XRF Screened
	404-76C1	Total Lead		204-217W	None, XRF Screened
	404-101C1	Total Lead, TAL Metals		204-219W	None, XRF Screened
	404-92C2	Total Lead, TAL Metals		204-227W	None, XRF Screened
	404-30C	Total Lead		204-577W	None, XRF Screened
	404-11C1	Total Lead, TAL Metals		204-236W	None, XRF Screened
	404-167C	Total Lead, TAL Metals		204-249W	None, XRF Screened
	404-198C	Total Lead		204-252W	None, XRF Screened
	404-44W	None, XRF Screened		204-339W	None, XRF Screened
	404-112W	None, XRF Screened		204-452W	None, XRF Screened
	404-185W	None, XRF Screened		204-445W	None, XRF Screened
	404-190W	None, XRF Screened		204-438W	None, XRF Screened
	404-194W	None, XRF Screened		204-163W	None, XRF Screened
	404-197W	None, XRF Screened		204-164W	None, XRF Screened
	404-151W	None, XRF Screened		204-430W	None, XRF Screened
	404-183W	None, XRF Screened		204-103W	None, XRF Screened
	404-106W	None, XRF Screened		204-421W	None, XRF Screened
	404-109W	None, XRF Screened		204-118W	None, XRF Screened
	404-133W	None, XRF Screened		204-462W	None, XRF Screened
	404-130W	None, XRF Screened		204-375W	None, XRF Screened
689	NE CON	Total Lead	1054	NE CON	Total Lead
	SE CON2	Total Lead		SE CON	Total Lead
	SW CON	Total Lead		SW CON2	Total Lead
	NW CON3	Total Lead		NW CON	Total Lead
	NE-1 CON	Total Lead		NW-1 CON	Total Lead
	SE-1 CON	Total Lead			
	SE-1 CON2	Total Lead			
	SE-2 CON	Total Lead			
	SW-1 CON	Total Lead			
	NW-1 CON	Total Lead			

For Buildings 204, 304, 404 and 707 in the above sample log, the first numeric set refers to the building number where the sample was collected. The second numeric set refers to a chronological sample number for that building. The "C" denotes a confirmation sample of the random grid while the "W" denotes a wall confirmation sample. Numbers after the "C" designation indicate the number of additional 12-inch lifts of excavation required.

For Buildings 689 and 1054 in the above sample log, the first alpha-numeric set refers to the quadrant where the sample was collected. The "CON" denotes a floor confirmation sample. Numbers after the "CON" designation indicate the number of additional 6-inch lifts of excavation required.

Laboratory testing of soil samples used the following EPA SW846 methods:

Total Lead	6010
TAL Metals	6010/7471
TCLP	1311 for extract, and 6010/7471 for metals.

Three individual floor grab samples were collected from 0 to 6-inches below the remediation excavation grade from the three "hottest" grids previously XRF determined. These three grab samples were then field screened using the XRF Analyzer. If the XRF field screening result was < 400 ppm lead for all three floor grabs, then a fourth floor grab sample was collected from a randomly selected grid within the 50' x 50' block, field screened with the XRF unit before being sent to the laboratory for confirmation testing by Total Lead, SW846, Method 6010.

If the XRF field screening result was > 400 ppm lead for any of the three floor grabs or the random grid, then for excavation purposes all of the adjacent 10' x 10' grids for each of the grabs above 400 ppm lead were XRF field screened. Supplemental excavations were 12-inches deep.

Also, at the Buildings 204, 304, 404 and 707 lead impacted soil removal sites, one wall sample was collected every 50 linear feet along the exterior perimeter for any excavation of two feet or less, and was tested by XRF field screening. The "left-in-place" analyses included both confirmation samples analyzed by the laboratory (random sample) and results obtained by the XRF Analyzer (wall sample). Additionally, at the Buildings 204, 304, 404 and 707 lead impacted soil removal sites, five grab samples per building location were collected at random grids in the remediation areas for Target Analyte List (TAL) Metals, SW846, Method 6010/7471. All laboratory analytics included a Navy NFESC Level C quality control package.

3.2 LABORATORY ANALYTICAL RESULTS

3.2.1 Water Towers – Buildings 689 and 1054

Initially, the confirmation results from two quadrants of Building 689 and one quadrant of Building 1054 did not achieve the 400 mg/kg Total Lead cleanup criteria shown in Table 1. Additional excavation, sampling, and analyses were then performed. The final condition of the Building 689 site indicates that the highest left-in-place Total Lead concentration is 290 mg/kg at sample location NE-2-DEC, a sample location that was outside of the remediation area. The final condition of the Building 1054 site indicates that the highest left-in-place Total Lead concentration is 250 mg/kg at sample location NW-2-DEC, a sample location that also was outside of the remediation area.

3.2.2 Buildings 204, 304, 404 and 707

Of the 53 surface soil random grid confirmation samples collected from Buildings 204, 304, 404 and 707, the off-site laboratory confirmed the on-site XRF screening results for Total Lead in 50 samples. Three sample locations [404-76C, 204-35C1 and 204-368C] initially failed to achieve the Table 1 400 mg/kg Total Lead cleanup criteria. Subsequent excavations of 12-inches in each area followed by additional sampling and analysis brought these three random grids to below the Table 1 cleanup criteria. All of the wall confirmation samples, field screened for Total Lead by XRF, were within the cleanup criteria of 400 mg/kg Total Lead and no further excavation was required.

3.3 CORRELATION OF LABORATORY AND FIELD XRF LEAD RESULTS

During the investigative and remediation phases of the work activities, three TN Technologies Spectrace 9000 XRF Analyzers were used for field screening. The correlation of the XRF test results relative to the associated laboratory results is presented for each machine used during the project.

From the time period of July 19 – August 12, 1999, unit S/N Q004 was used for field screening. In this time period, six soil samples were selected for correlation purposes. The samples were field screened for Total Lead by XRF and then submitted to the off-site laboratory for analysis of Total Lead by SW846, Method 6010. From this limited correlation, an XRF screening value of 300 ppm Lead was used during this time period of the investigative phase to guide the field excavation activities.

Table 3: Correlation of Laboratory Results with XRF Spectrace Unit S/N Q004

Sample No.	XRF, ppm Lead	Laboratory Analytical, ppm Lead
707-231	414	490
304-02	1238	1700
304-05	313	410
304-07	1593	1500
707-229	580	750
204-01	2801	4100

Due to operational problems encountered with unit S/N Q004 [primarily slow processing time], this unit was replaced with unit S/N Q040 on August 17, 1999. Unit S/N Q040 was used until August 26, 1999. During this time period, four soil samples were selected for correlation purposes. The samples were field screened for Total Lead by XRF and then submitted to the off-site laboratory for analysis of Total Lead by SW846, Method 6010. From this data, a better correlation between the two distinctly different testing methods was obtained and an XRF screening value of 360 mg/kg Total Lead was used during this time period of the investigative phase to guide field operations.

Table 4: Correlation of Laboratory Results with XRF Spectrace Unit S/N Q040

Sample No.	XRF, ppm Lead	Laboratory Analytical, ppm Lead
204-221	383	340
204-224	343	300
204-225	636	560
204-251	1069	1100

Prior to moving into the remediation phase of the work activities and since the rental time period of the previous instrument had expired, the third Spectrace 9000 XRF Analyzer, unit S/N Q007 was put into service on September 8, 1999. This instrument would be used through the remainder of the work activities at the lead impacted sites, whether investigative or remediation confirmation.

Prior to the excavation activities at the lead impacted sites, a series of soil samples was collected in an effort to establish a correlation between Total Lead (Method 6010), Toxicity Characteristic Leaching Procedure (TCLP) for Lead (Method 1311/6010) and field XRF total lead testing.

Table 5: Correlation of Laboratory Results with Spectrace Unit S/N Q007

Sample No.	XRF, ppm Lead	Lab Anal., ppm Lead	Lab Anal., TCLP, mg/L
Corr-01	984	930	< 0.5
Corr-02	884	1200	< 0.5
Corr-03	717	1800	1.5
Corr-04	229	240	< 0.6
Corr-05	492	500	< 0.5
Corr-06	620	2300	< 0.5
Corr-07	201	170	4.2
Corr-08	2217	2100	< 0.5
Corr-09	3412	5000	64
Corr-10	154	100	5.4
Corr-11	5304	7900	200
Corr-12	3052	7100	58
Corr-13	9428	17000	450
Corr-14	50510	50000	1600
Corr-15	3697	9200	400
Corr-16	19480	42000	1500
Corr-17	1557	1600	15
Corr-18	21080	33000	1500
Corr-19	39610	55000	1500
Corr-20	1303	4100	35
Corr-21	6557	13000	160
Corr-22	3287	6500	21
Corr-23	3017	7000	56
Corr-24	1552	3300	120

Although this data shows limited information at concentrations near the cleanup criteria [i.e., 400 mg/kg Total Lead], a conservative linear relationship was developed between the field XRF screening method and the laboratory method. An XRF field screening value of 350 ppm Total Lead was used to indicate if additional soil excavation was required and to guide field activities. Unfortunately, the data did not show a clear correlation between Total Lead and TCLP Lead. This forced a change in the planned field operations toward segregating soils excavated from the lead impacted sites into 100 cyd piles, and then submitting a soil sample from each pile to the laboratory for analysis of TCLP Lead by Methods 1311 and 6010 to determine if the pile would be disposed of as a hazardous or non-hazardous waste. Throughout the duration of the various work activities of this project and independent of the instrumentation used, the inconsistencies in the correlation attempts between the two distinct methods for determining Total Lead in soil can largely be attributed to the gross non-homogeneous nature of the soil.

3.4 CLEANUP CONFIRMATION RESULTS

Table 6 presents the off-site laboratory analytical results and the associated on-site XRF screening results for Total Lead in all of the post excavation confirmation samples for Buildings 204, 304, 404, and 707. All of the data in this table are sample results that represent the "left-in-place" condition of the site. The results indicate that each of these four remediation locations achieved the Table 1 cleanup criteria of 400 mg/kg Total Lead.

Table 6: Cleanup Confirmation Results for Buildings 204, 304, 404 and 707

Sample No.	XRF, ppm Lead	Lab Analytical, ppm Lead
707-276C	25	18.9
707-278C	23	33.6
707-262C	37	37.1
707-46C	96	63.1
707-98C	156	41.8
707-155C	14	19.1
707-134C	65	79.9
707-01C	91	65.6
304-09C	23	10.3
304-14C	10	8.2
304-119C	< 10	4.7
304-34C	< 10	9.2
304-37C	11	7.8
404-183C1	136	247
404-197C	84	70.5
404-144C	32	21.1
404-133C	29	17.5
404-76C1	28	10.6
404-101C1	56	14.0
404-92C2	123	124
404-30C	93	345
404-11C1	25	16.9
404-167C	279	187
404-198C	190	286
204-368C1	Not determined	10
204-559C	14	9.9
204-374C	74	87.3
204-411C	28	28.4
204-484C	73	21.0
204-154C	18	17.2
204-136C	149	134
204-390C	171	113
204-25C	33	96.3
204-159C	< 10	7.1
204-291C	77	68.1
204-442C	25	24.4
204-299C	< 10	14.3
204-80C	39	21.9
204-60C	26	20.3
204-331C1	< 10	10
204-381C	70	61.5
204-35C2	Not determined	7.0
204-338C1	36	19.9
204-164C	< 10	11.2
204-96C	12	7.3
204-515C	32	22.8
204-423C	18	11.9
204-400C	38	23.3

Sample No.	XRF, ppm Lead	Lab Analytical, ppm Lead
204-324C1	40	21.0
204-320C	30	28.2
204-548C	44	44.8
204-558C1	16	9.6
204-554C	36	35.2

3.5 ADDITIONAL FIELD XRF DATA

At each of the Buildings 204, 304, 404, and 707 remediation sites, several samples were collected for XRF field screening only and were not split for laboratory analyses. Samples were collected from the remediation excavation floor, side walls, and also outside of the remedial excavation. Tables 7 through 18 present this information. Refer to drawing RD-07 for the field locations of these samples.

Table 7: XRF Results for Building 204 Excavation Floor Samples

Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead
204-104C	97	204-293C	26	204-321C	32
204-105C	31	204-295C	16	204-383C	251
204-107C	14	204-296C	252	204-384C	131
204-109C	42	204-318C1	<10	204-386C1	27
204-114C	372	204-307C	324	204-387C1	10
204-115C	340	204-308C	128	204-38C	69
204-120C1	16	204-314C	<10	204-126C	252
204-121C1	81	204-315C	42	204-392C	253
204-122C1	<10	204-316C	43	204-394C	24
204-133C	302	204-319C	292	204-405C	19
204-134C	26	204-413C	<10	204-410C1	29
204-149C	<10	204-325C1	19	204-414C	13
204-153C	26	204-327C	32	204-140C	46
204-330C	<10	204-328C	9	204-428C	15
204-157C	10	204-32C	15	204-429C	12
204-186C	14	204-431C	<10	204-435C	250
204-225C	88	204-339C1	23	204-436C	13
204-248C	<10	204-341C1	79	204-439C	15
204-249C1	<10	204-34 / C1	123	204-440C	<10
204-250C	21	204-348C1	17	204-431C	<10
204-251C	10	204-35C2	7	204-445C	<10
204-252C	317	204-368C1	10	204-451C	<10
204-255C	388	204-36C	193	204-452C1	17
204-257C	9	204-373C	154	204-458C	37
204-577C	33	204-431C	<10	204-45C	121
204-539C1	27	204-379C	86	204-471C	56

Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead
204-478C	215	204-540C1	43	204-579C	29
204-484C	73	204-541C	53	204-580C	215
204-496C1	<10	204-542C	<10	204-581C	148
204-502C	29	204-544C	147	204-582C	57
204-503C	94	204-547C	29	204-583C	222
204-508C	42	204-548C	44	204-60C	26
204-509C	44	204-554C	36	204-71C1	50
204-50C	184	204-558C1	16	204-75C	80
204-515C	32	204-559C	14	204-77C	48
204-522C	44	204-563C	30	204-80C	39
204-528C	105	204-567C	30	204-83C	20
204-529C	51	204-570C	36	204-91C	17
204-535C	22	204-573C	64	204-95C	21
204-538C1	26	204-574C	271	204-96C	12

Table 8: XRF Results for Building 204 Side Wall Samples

Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead
204-103W	47	204-39W	104
204-118W	202	204-421W	10
204-163W	199	204-430W	22
204-164W	263	204-438W	<10
204-191W	28	204-445W	17
204-194W	24	204-452W	25
204-213W	45	204-462W	30
204-217W	82	204-473W	64
204-219W	23	204-487W	88
204-227W	22	204-492W	42
204-236W	193	204-510W	140
204-249W	126	204-513W	26
204-252W	17	204-520W	135
204-28W	59	204-522W	14
204-339W	36	204-577W	<10
204-375W	140	-----	-----

Table 9: XRF Results for Building 204 Samples Outside Remediation Excavation

Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead
204-141	318	204-199	251	204-243	85
204-142	152	204-202	109	204-244	135
204-143	38	204-203	92	204-247	223
204-144	56	204-204	85	204-256	220
204-145	88	204-205	83	204-258	131
204-146	23	204-206	40	204-259	174
204-147	148	204-207	55	204-260	79
204-148	275	204-208	260	204-261	23
204-170	144	204-209	100	204-262	43
204-171	87	204-211	148	204-263	56
204-172	90	204-212	71	204-265	88
204-173	107	204-214	237	204-266	51
204-174	98	204-215	123	204-267	44
204-175	87	204-216	148	204-269	296
204-176	115	204-217	50	204-270	30
204-177	157	204-218	236	204-271	28
204-178	212	204-219	193	204-272	50
204-179	259	204-223	273	204-273	230
204-180	238	204-228	46	204-274	160
204-181	48	204-229	84	204-275	143
204-182	62	204-230	42	204-276	101
204-183	161	204-231	86	204-277	64
204-184	33	204-232	151	204-278	80
204-185	30	204-233	28	204-279	97
204-187	185	204-234	13	204-280	31
204-188	100	204-235	32	204-281	50
204-189	298	204-238	39	204-282	84
204-190	122	204-239	27	204-283	84
204-192	21	204-240	47	204-285	234
204-195	100	204-241	36	204-286	30
204-198	122	204-242	206	204-287	148
204-288	79	204-369	144	204-464	98
204-29	53	204-370	92	204-465	160
204-290	101	204-371	13	204-466	130
204-30	59	204-372	238	204-467	166
204-31	156	204-376	179	204-468	36
204-332	231	204-397	56	204-488	66
204-350	97	204-398	106	204-504	250
204-351	33	204-40	139	204-505	124
204-352	34	204-403	359	204-511	250
204-353	53	204-404	21	204-518	88



CLEANUP CONFIRMATION

Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead
204-354	108	204-406	159	204-521	139
204-355	96	204-407	79	204-530	14
204-356	78	204-409	65	204-531	82
204-357	41	204-41	122	204-532	80
204-358	46	204-415	229	204-533	50
204-359	27	204-42	23	204-534	22
204-360	53	204-43	40	204-543	24
204-361	96	204-433	364	204-546	51
204-362	42	204-44	47	204-67	202
204-365	275	204-450	221	204-68	133
204-366	225	204-453	294	204-70	164
204-367	211	204-454	253	-----	-----

Table 10: XRF Results for Building 304 Excavation Floor Samples

Sample Number	Total Lead (mg/kg)
304-02C	<10
304-07C	10
304-08C	10
304-100C	<10
304-115C	<10
304-13C	<10
304-14C	10
304-15C	<10
304-19C	33
304-20C	9
304-28C	<10
304-30C	<10
304-56C	21
304-61C	39
304-82C	<10
304-84C	<10



Table 11: XRF Results for Building 304 Side Wall Samples

Sample Number	XRF, ppm Lead
304-17W	30
304-22W	9
304-50W	<10
304-69W	41
304-74W	42
304-79W	12
304-97W	19
304-113W	21

Table 12: XRF Results for Building 304 Samples Outside Remediation Excavation

Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead
304-10	<10	304-48	297
304-104	30	304-49	163
304-105	38	304-50	113
304-107	61	304-51	138
304-109	53	304-52	166
304-11	27	304-53	257
304-113	62	304-68	146
304-114	104	304-69	126
304-116	109	304-70	204
304-118	72	304-72	133
304-12	<10	304-73	108
304-121	75	304-74	39
304-122	196	304-75	88
304-123	87	304-77	124
304-124	152	304-78	107
304-16	<10	304-79	55
304-17	<10	304-80	107
304-18	<10	304-81	65
304-20	42	304-90	96
304-21	266	304-91	166
304-23	51	304-92	48
304-24	182	304-94	34
304-25	101	304-95	33
304-45	66	304-96	40
304-46	155	304-97	18
304-47	216	304-98	163



Table 13: XRF Results for Building 404 Excavation Floor Samples

Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead
404-62C1	139	404-188C	98
404-113C	124	404-18C1	29
404-115C	55	404-98C2	21
404-122C2	284	404-199C2	28
404-12C	178	404-200C2	257
404-130C	60	404-201C2	26
404-139C	112	404-59C	167
404-148C	93	404-63C1	110
404-14C2	25	404-65C1	148
404-157C2	35	404-73C1	81
404-158C2	22	404-74C1	50
404-170C	36	404-78C1	92
404-172C	115	404-80C1	74
404-173C	124	414-03C1	223
404-177C2	226	404-93C2	19
404-178C2	279	-----	-----

Table 14: XRF Results for Building 404 Side Wall Samples

Sample Number	XRF, ppm Lead
404-44W	28
404-106W	75
404-109W	45
404-112W	9
404-130W	54
404-133W	<10
404-151W	113
404-183W	121
404-185W	86
404-190W	153
404-194W	198
404-197W	<10

Table 15: XRF Results for Building 404 Samples Outside Remediation Excavation

Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead
404-01	19	404-185	186
404-02	195	404-19	128
404-03	60	404-20	<10
404-04	20	404-204	214
404-05	171	404-21	239
404-06	109	404-22	215
404-114	209	404-23	288
404-124	149	404-24	251
404-125	72	412-02	183
404-126	163	412-03	18
404-127	297	412-04	72
404-128	111	414-04	160
404-131	36	414-08	190
404-132	29	414-09	145
404-134	44	414-10	220
404-135	43	414-11	298
404-136	89	414-12	146
404-137	225	414-13	225
404-138	184	414-14	188
404-140	84	414-15	142
404-149	248	414-16	150
404-150	200	414-17	245
404-152	116	414-18	180
404-153	50	414-19	180
404-154	78	414-20	116
404-155	150	414-21	126
404-160	272	-----	-----

Table 16: XRF Results for Building 707 Excavation Floor Samples

Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead
707-03C	161	707-260C	274
707-10C	85	707-146C	153
707-116C	208	707-268C	67
707-14C	91	707-257C	25
707-259C	34	707-284C	ND
707-165C	343	707-40C	95
707-166C	126	707-270C	86
707-180C	87	707-49C	31
707-214C	229	707-50C	9

Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead
707-222C	64	707-58C1	ND
707-231C1	44	707-74C	127
707-254C1	250	707-75C	44
707-256C1	42	707-76C	16

Table 17: XRF Results for Building 707 Side Wall Samples

Sample Number	XRF, ppm Lead
707-107W	<10
707-161W	309
707-170W	86
707-177W	213
707-188W	11
707-204W	140
707-208W	60
707-224W	<10
707-263W	66
707-275W	22
707-285W	<10
707-294W	147
707-37W	202
707-69W	9
707-79W	22

Table 18: XRF Results for Building 707 Samples Outside Remediation Excavation

Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead
707-100	238	707-159	167	707-194	123
707-101	240	707-160	163	707-195	145
707-102	257	707-161	184	707-196	126
707-106	257	707-162	195	707-197	100
707-107	221	707-163	67	707-198	103
707-108	45	707-164	266	707-202	85
707-109	<10	707-167	187	707-203	79
707-117	69	707-168	35	707-204	106
707-118	110	707-169	62	707-205	145
707-119	129	707-170	65	707-206	202
707-120	175	707-171	<10	707-207	134
707-121	223	707-172	16	707-208	127
707-125	219	707-173	51	707-216	88
707-126	73	707-174	27	707-217	35

Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead	Sample Number	XRF, ppm Lead
707-127	36	707-175	<10	707-218	272
707-128	32	707-176	67	707-219	132
707-129	39	707-177	283	707-220	116
707-130	224	707-178	269	707-224	110
707-137	114	707-179	79	707-225	213
707-138	28	707-182	197	707-226	164
707-139	<10	707-183	113	707-227	107
707-140	54	707-184	103	707-228	206
707-147	38	707-185	<10	707-235	91
707-148	36	707-186	69	707-236	93
707-149	33	707-187	87	707-237	17
707-150	82	707-188	121	707-238	<10
707-151	76	707-189	140	707-239	<10
707-152	76	707-190	15	707-240	72
707-153	69	707-191	81	707-241	60
707-154	116	707-192	103	707-242	49
707-158	186	707-193	50	707-243	<10
707-244	42	707-292	63	707-65	162
707-245	<10	707-293	195	707-66	34
707-247	230	707-31	204	707-67	194
707-248	167	707-37	160	707-68	227
707-249	144	707-42	120	707-69	53
707-250	107	707-47	189	707-70	53
707-263	183	707-51	46	707-71	43
707-273	65	707-52	45	707-72	34
707-275	44	707-53	98	707-73	252
707-277	50	707-54	51	707-79	222
707-279	35	707-55	64	707-87	281
707-281	91	707-56	54	707-88	128
707-283	49	707-57	63	707-89	224
707-285	73	707-61	283	707-90	211
707-287	141	707-62	231	707-91	195
707-290	76	707-63	106	707-92	178
707-291	115	707-64	109	-----	-----

APPENDIX A
PHOTOGRAPHS

**NTCB - Port Deposit, Maryland: Small Arms Range Cleanup Action
Delivery Order No. 43**



Photo 1. Initial Building 707 Excavation Location 6/22/99



Photo 2. Initial Building 707 Excavation 6/22/99

**NTCB - Port Deposit, Maryland: Small Arms Range Cleanup Action
Delivery Order No. 43**



Photo 3. Building 707 Excavation—Original Three Trees in Center 10/15/99



Photo 4. The Three Trees in the Center of 707 Excavation 10/15/99

**NTCB - Port Deposit, Maryland: Small Arms Range Cleanup Action
Delivery Order No. 43**



Photo 5. Building 707 Excavation Areas P-5, P-6, P-7 10/15/99



Photo 6. Building 707—Excavation North of 3-Trees Facing West 10/15/99

**NTCB - Port Deposit, Maryland: Small Arms Range Cleanup Action
Delivery Order No. 43**



**Photo 7. Building 707 Excavation East of 3-Trees Facing Toward Building 707
10/15/99**



Photo 8. Building 707 Excavation—South of 3-Trees Facing Building 10/15/99

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Delivery Order No. 43**



Photo 9. Building 304 Excavation—South End of Building 10/15/99



Photo 10. Building 304 Excavation—West Side of Building 10/15/99

**NTCB - Port Deposit, Maryland: Small Arms Range Cleanup Action
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Photo 11. Building 304 Excavation—North Side of Building 10/15/99



Photo 12. Building 404 Excavation—North Side of Building Facing East 10/15/99

**NTCB - Port Deposit, Maryland: Small Arms Range Cleanup Action
Delivery Order No. 43**



Photo 13. Building 404 Excavation—Lower Bank Area West of Building Facing South 10/15/99



Photo 14. Building 404 Excavation—North End of Lower Bank Excavation 10/15/99

**NTCB - Port Deposit, Maryland: Small Arms Range Cleanup Action
Delivery Order No. 43**



Photo 15. Building 404 Excavation—Lower Bank Area Facing North 10/15/99



Photo 16. Building 404 Excavation—Excavation Area West Facing North 10/15/99

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Photo 17. Building 204 Excavation—North Side of Building 10/15/99



**Photo 18. Building 204 Excavation—South Side Facing West - Sample Location
204-35 in Foreground 10/15/99**

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Photo 19. Building 204 Excavation—Northeast Corner of Excavation 10/15/99



Photo 20. Building 204 Excavation—Excavation Areas P-20, P-21, P-22 10/15/99

**NTCB - Port Deposit, Maryland: Small Arms Range Cleanup Action
Delivery Order No. 43**



**Photo 21. Drainage Ditch Excavation Area West Corner of Building 204—Facing
South 10/15/99**



**Photo 22. Drainage Ditch Excavation Area West Corner of Building 204—Facing
West 10/15/99**

**NTCB - Port Deposit, Maryland: Small Arms Range Cleanup Action
Delivery Order No. 43**



Photo 23. Building 707 Area—Soil Stockpile Area 9/28/99



Photo 24. Building 204 Area Soil Stockpile Area Sediment Trap 9/28/99

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Photo 25. Building 404 Excavation—Soil Stockpile Area 10/15/99



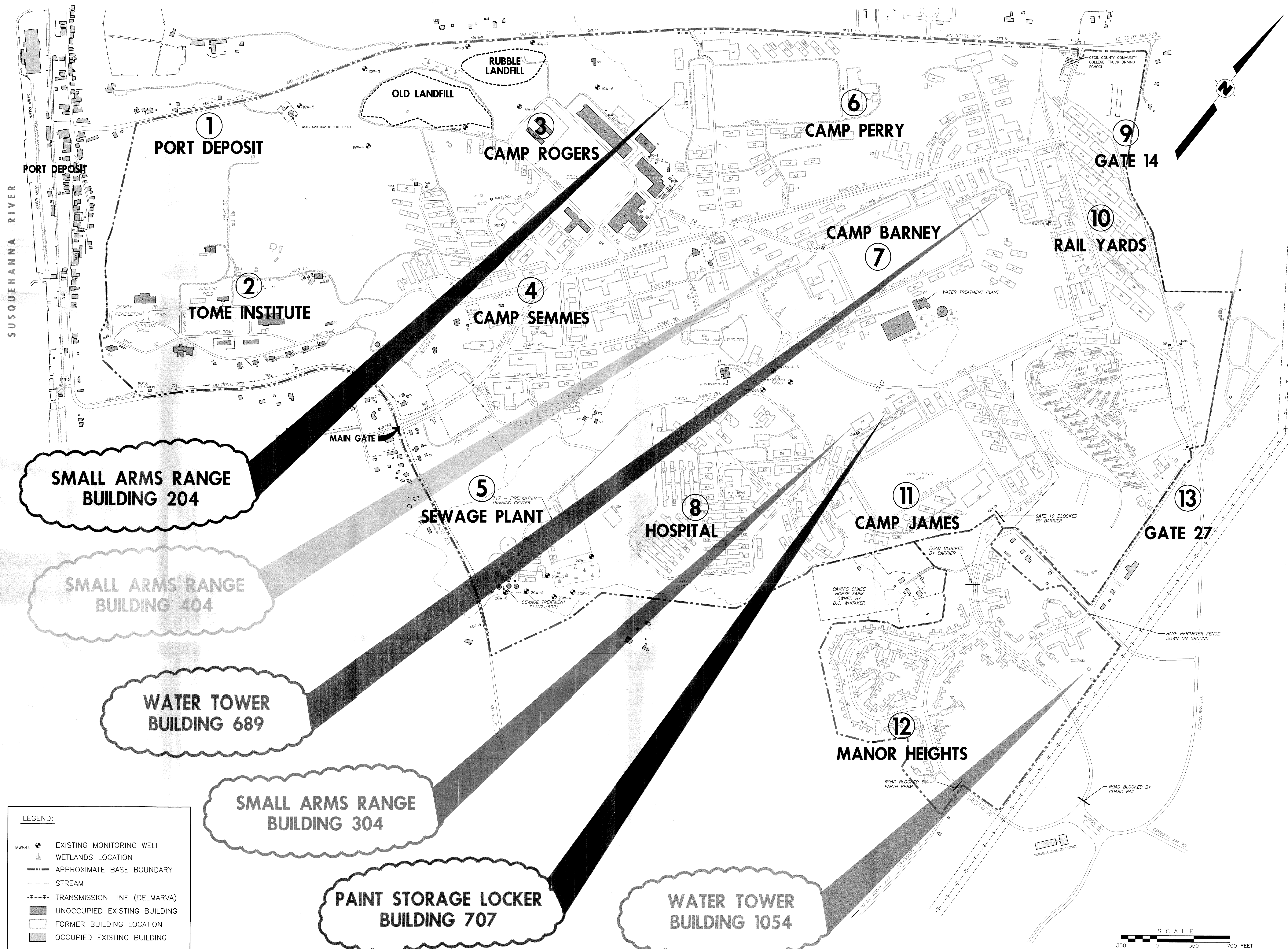
Photo 26. Building 404 Excavation—Soil Stockpile Area - Stone Entrance 10/15/99

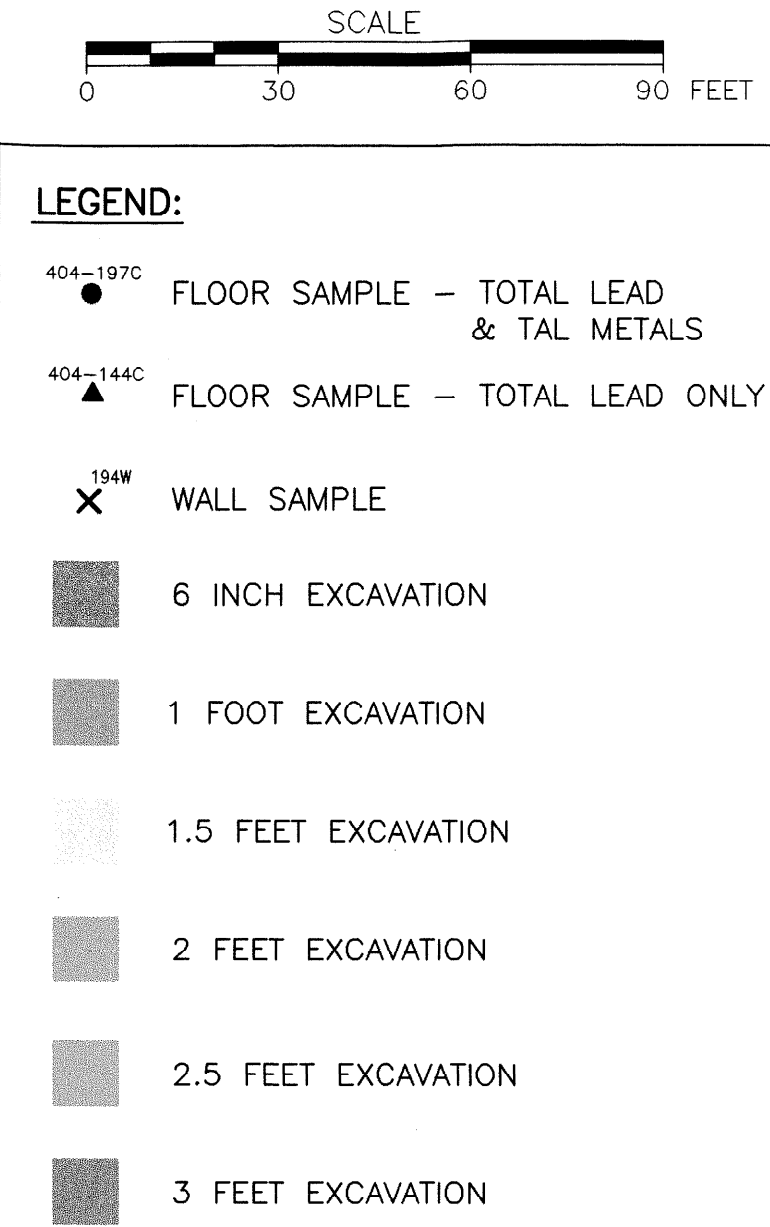
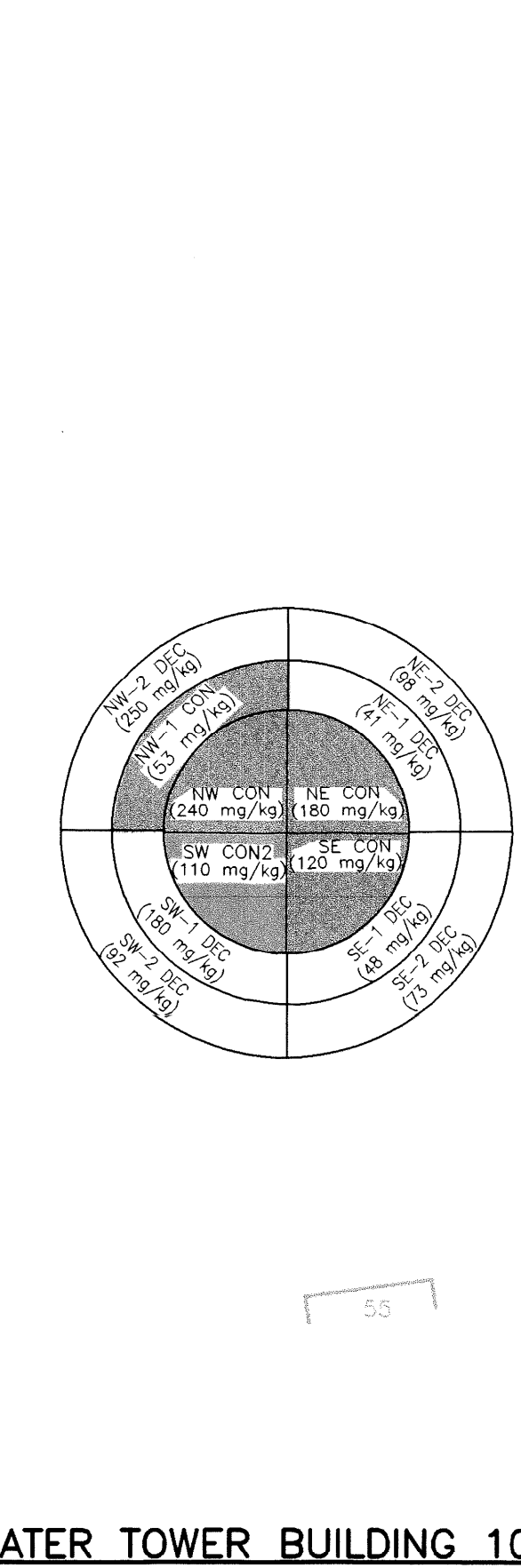
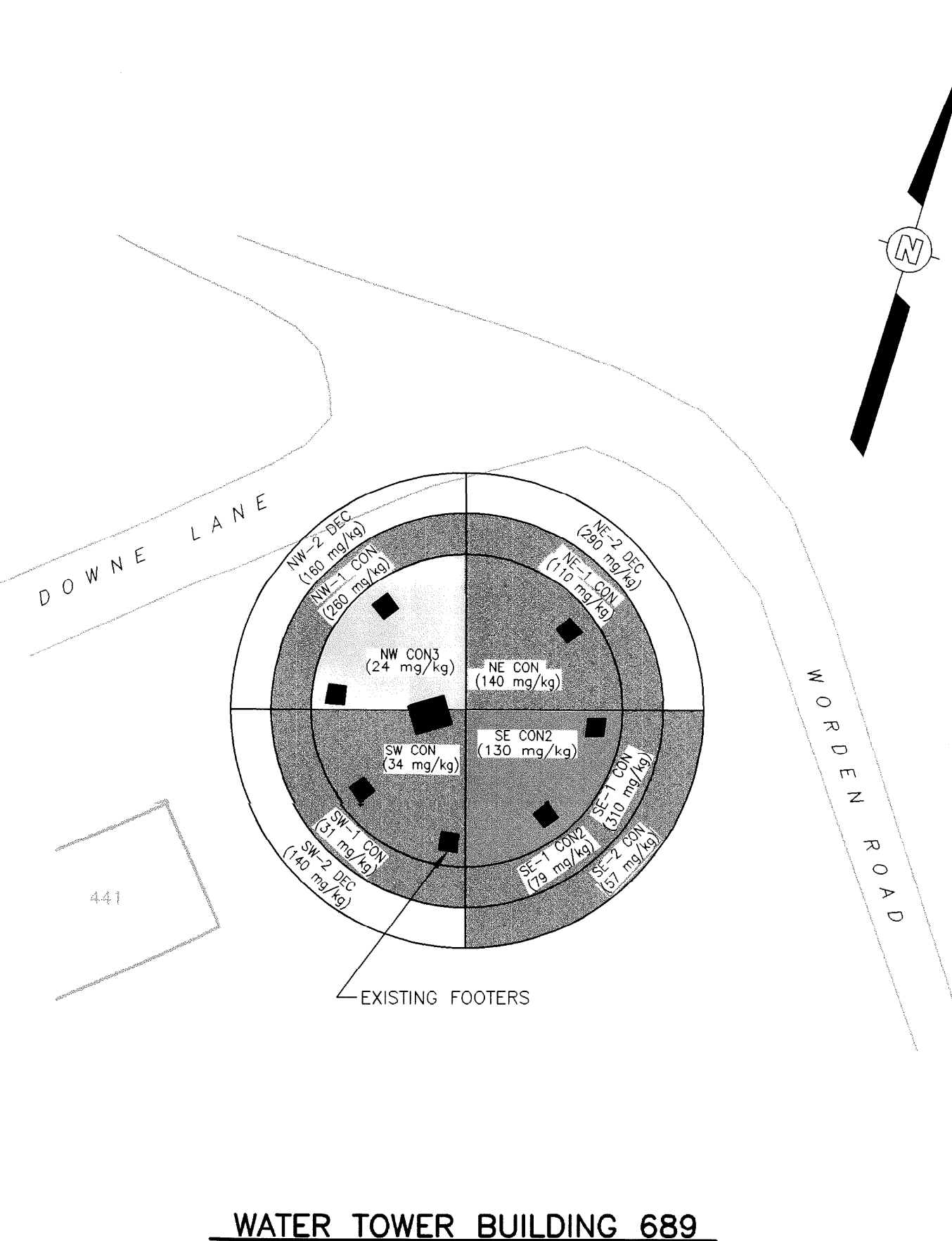
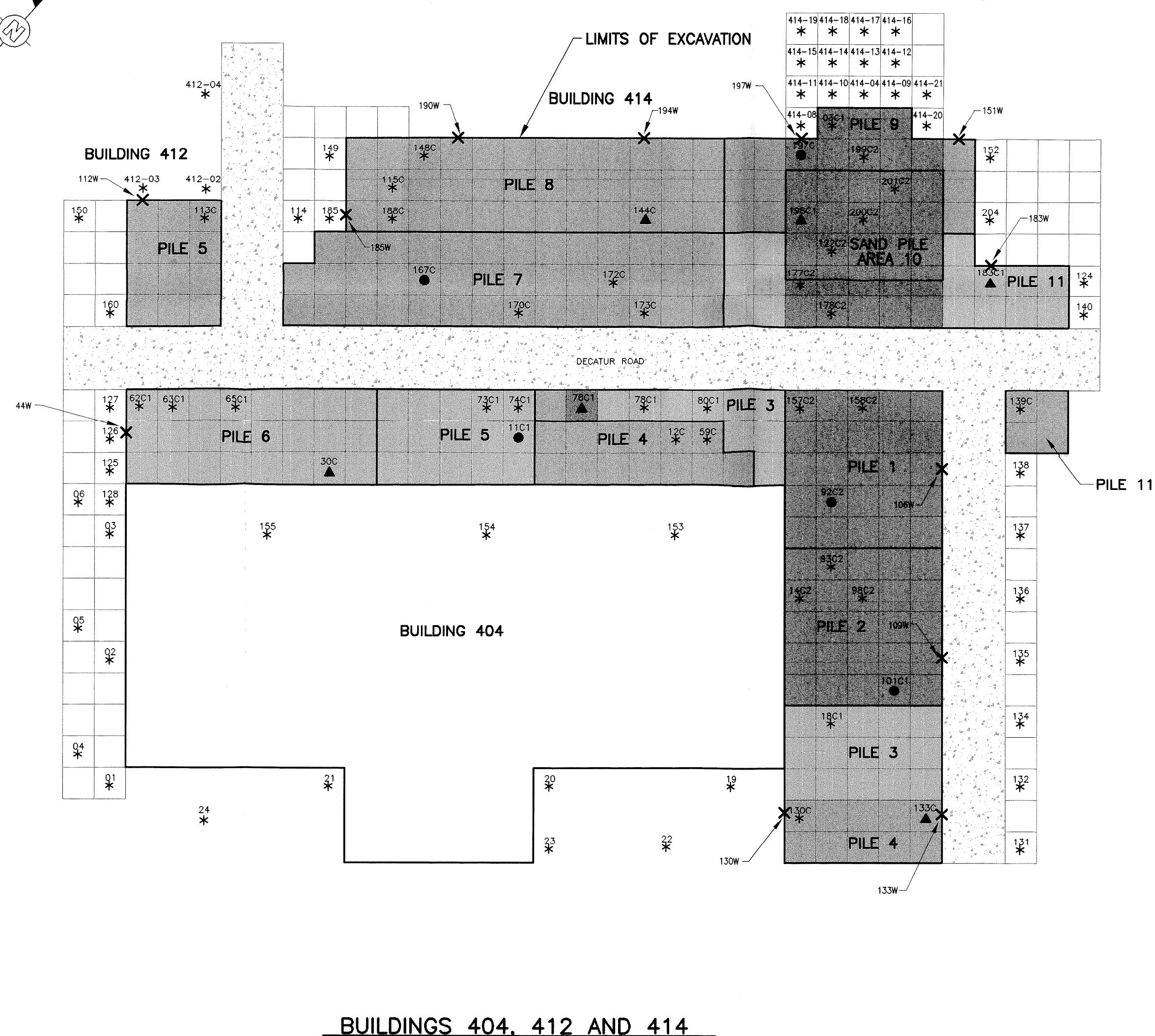
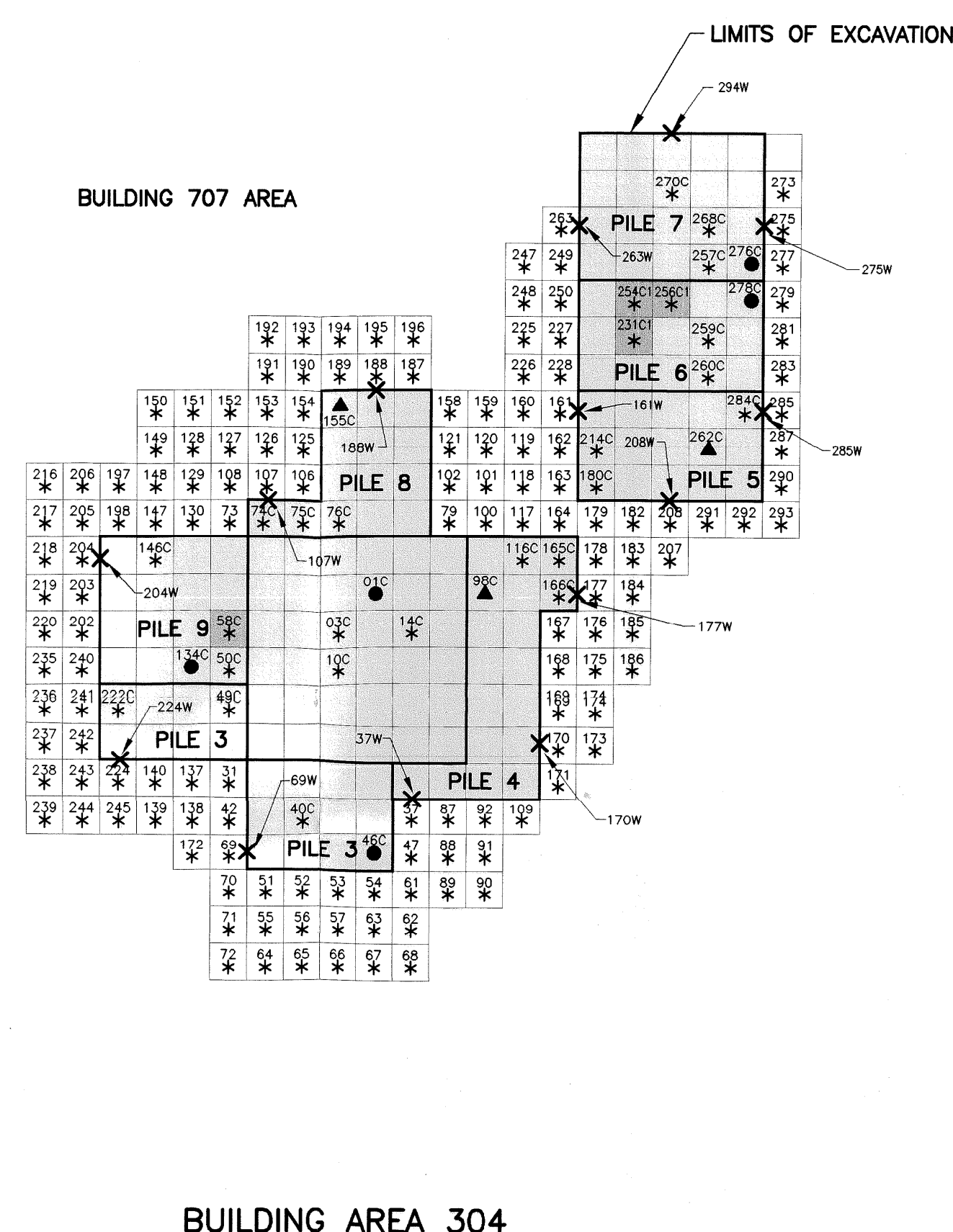
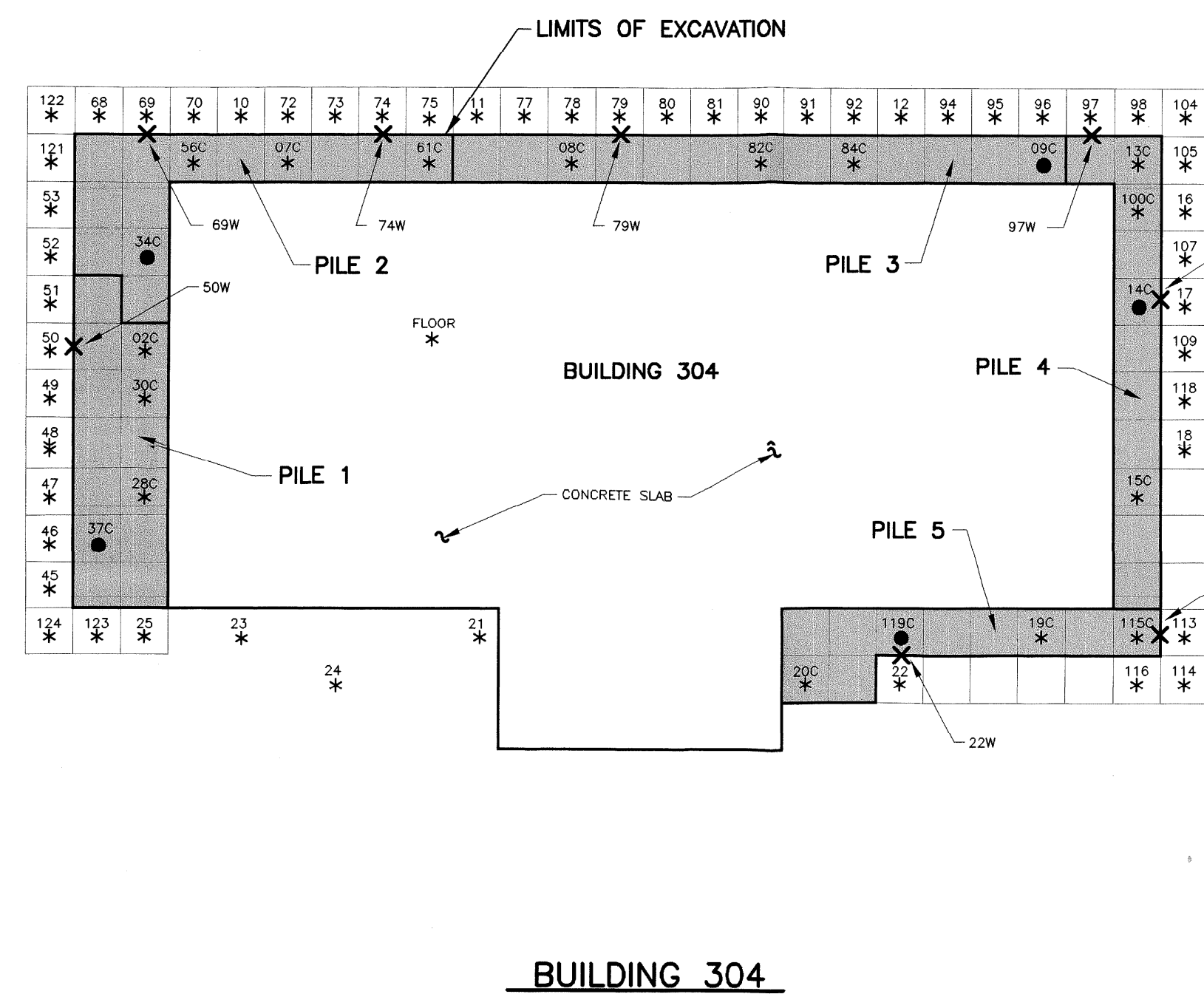
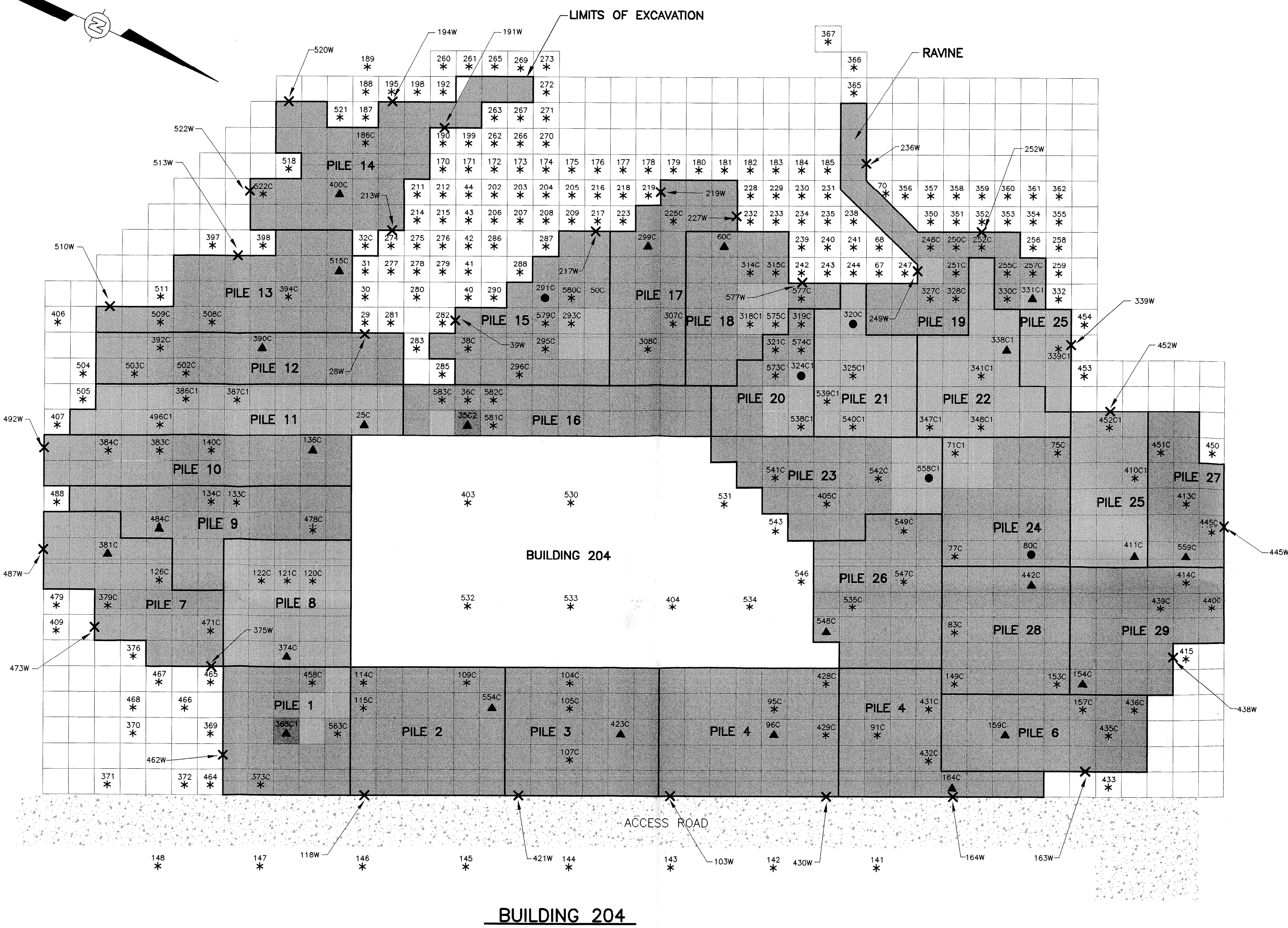
**NTCB - Port Deposit, Maryland: Small Arms Range Cleanup Action
Delivery Order No. 43**



Photo 27. Building 404 Excavation—Soil Stockpile Area 10/15/99

APPENDIX B
RECORD DRAWINGS



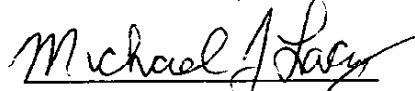


APPENDIX C
DATA VALIDATION REPORT

DATE: October 20, 1999

SUBJECT: Data Validation for
Former Naval Training Center-Bainbridge
Port Deposit, Maryland

FROM: Michael J. Lacy, Ph.D.

A handwritten signature in cursive script that reads "Michael J. Lacy". The signature is written in dark ink and is positioned above the printed name and title.

Field Analytical Services Manager
IT Corporation – Trenton, New Jersey

TO: Mary Cooke – Project Contact
Hazardous Site Cleanup Division, 3HS13

OVERVIEW

Five (5) composite soil samples were analyzed for lead by EPA SW-846 Method 6010. No site-specific Quality Control samples were analyzed. Analytical Laboratory Services, located in Middletown, PA, performed the analyses.

SUMMARY

These samples were analyzed successfully.

MAJOR PROBLEMS

No major problems with the validity of the analytical data were found.

MINOR PROBLEMS

- The laboratory duplicate had a high relative percent difference. Lead results should be qualified estimated (J).

NOTES

There are no notes associated with this laboratory validation report.

REPORT CONTENT STATEMENT

These data were reviewed in accordance with USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses. The text of this report only addresses items that affect the validity of the data contained therein.

ATTACHMENT A

Glossary of Data Qualifiers

Glossary of Data Qualifier Codes

Codes Relating to Identification

(Confidence Concerning Presence or Absence of Compounds)

U = Not Detected. The associated number indicates the approximate sample concentration necessary to be detected.

(No Code) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm the presence or absence in future sampling efforts.

Codes Related to Quantitation

(Can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

Other Codes

Q = No analytical result.

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

ATTACHMENT B

Data Summary Forms

Site: FNTC - Bainbridge - Water Tower at Building 689 Confirmation Results

Lab: Analytical Laboratory Services

Reviewer: Michael J. Lacy, Ph.D.

Date: 01 December 1999

Report Number: SDG-009

Sample I.D.	Bain689NECon		Bain689NE1Con		Bain689SE1Con		Bain689SE2Con	
Matrix	Soil		Soil		Soil		Soil	
Units	mg/kg		mg/kg		mg/kg		mg/kg	
Date Sampled	11/20/98		11/20/98		11/20/98		11/20/98	
Time Sampled	1100		1105		1115		1120	
% Moisture	14		9.7		9.2		9.3	
pH	N/A		N/A		N/A		N/A	
Dilution Factor	1.0		1.0		1.0		1.0	
	Result	VQ	Result	VQ	Result	VQ	Result	VQ
Lead	140	J	110	J	310	J	57	J

VQ - Validation Qualifier

ATTACHMENT C

Laboratory Reported Results



**ANALYTICAL
LABORATORY SERVICES, INC.**

Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 1
Sample # U23205-1

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

November 25, 1998

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: 03562-LS-BB	Date Sampled	: 11/20/98 11:00 AM
Location	: BAIN 689 NE CON	Date Received	: 11/20/98
Sample State	: Soil Composite	Date Approved	: 11/25/98
Collector	: DB	Discard Date	:

TEST/PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
ALS				
TOTAL METALS BY ICP				
Lead	120	mg/kg	10	6010B
Lead	140	mg/kg	Dry Weight	
WATER QUALITY				
Total Solids	86.0	%	0.1	3540B
DATA PACKAGES				
DATA PACKAGE	NFESC Lev C			

Due to the failure of the matrix prep spikes, the sample was post-spiked to demonstrate that there were no matrix interferences. The acceptable spike limits according to approved EPA methods for 6010B are 75-125%.

**** Continued ****

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LABORATORY SERVICES, INC.**

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Page # 2
Sample # U23205-1

November 25, 1998

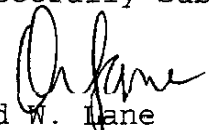
This report relates only to the samples as received by the laboratory, and may only be reproduced in full.

QUALITY ASSURANCE REPORT

Q/A PARAMETER	RESULT		
METALS			
TOTAL METALS BY ICP			
Lead	102	% Recovery	Spike
Lead	104	% Recovery	Spike
Lead	130	% Recovery	Spike
Lead	156	% Recovery	Spike

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS	
			DATE	TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	11/22/98	15:39
3050B Digestion for Metals		JWK	11/20/98	
Total Solids	See Chain of Custody	DET	11/24/98	07:00
DATA PACKAGE		SMD	11/24/98	

Respectfully Submitted,


David W. Lane
Laboratory Manager

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**ANALYTICAL
LABORATORY SERVICES, INC.**

Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 1
Sample # U23205-2

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

November 25, 1998

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: 03562-LS-BB	Date Sampled	: 11/20/98 11:05 AM
Location	: BAIN 689 NE-1 CON	Date Received	: 11/20/98
Sample State	: Soil Composite	Date Approved	: 11/25/98
Collector	: DB	Discard Date	:

TEST/PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
ALS				
TOTAL METALS BY ICP				
Lead	101	mg/kg	10	6010B
Lead	110	mg/kg	Dry Weight	
WATER QUALITY				
Total Solids	90.3	%	0.1	3540B
DATA PACKAGES				
DATA PACKAGE	NFESC Lev C			

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**** Continued ****

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Page # 2
Sample # U23205-2

November 25, 1998

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS	
			DATE	TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	11/22/98	15:39
3050B Digestion for Metals		JWK	11/20/98	
Total Solids	See Chain of Custody	DET	11/24/98	07:00
DATA PACKAGE		SMD	11/24/98	

Respectfully Submitted,

David W. Lane
Laboratory Manager

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**ANALYTICAL
LABORATORY SERVICES, INC.**

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Page # 1
Sample # U23205-4

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

November 25, 1998

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: 03562-LS-BB	Date Sampled	: 11/20/98 11:15 AM
Location	: BAIN 689 SE-1 CON	Date Received	: 11/20/98
Sample State	: Soil Composite	Date Approved	: 11/25/98
Collector	: DB	Discard Date	:

TEST/PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
ALS				
TOTAL METALS BY ICP				
Lead	284	mg/kg	9.5	6010B
Lead	310	mg/kg	Dry Weight	
WATER QUALITY				
Total Solids	90.8	%	0.1	3540B
DATA PACKAGES				
DATA PACKAGE	NFESC Lev C			

This report relates only to the samples as received by the laboratory, and may only be reproduced in full.

**** Continued ****

00012



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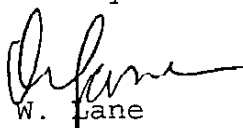
Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 2
Sample # U23205-4

November 25, 1998

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS	
			DATE	TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	11/22/98	15:39
3050B Digestion for Metals		JWK	11/20/98	
Total Solids	See Chain of Custody	DET	11/24/98	07:00
DATA PACKAGE		SMD	11/24/98	

Respectfully Submitted,


David W. Lane
Laboratory Manager

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**ANALYTICAL
LABORATORY SERVICES, INC.**

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Page # 1
Sample # U23205-5

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

November 25, 1998

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: O3562-LS-BB	Date Sampled	: 11/20/98 11:20 AM
Location	: BAIN 689 SE-2 CON	Date Received	: 11/20/98
Sample State	: Soil Composite	Date Approved	: 11/25/98
Collector	: DB	Discard Date	:

TEST/PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
ALS				
TOTAL METALS BY ICP				
Lead	52	mg/kg	10	6010B
Lead	57	mg/kg	Dry Weight	
WATER QUALITY				
Total Solids	90.7	%	0.1	3540B

DATA PACKAGES
DATA PACKAGE NFESC Lev C

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**** Continued ****

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LABORATORY SERVICES, INC.**

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Page # 2
Sample # U23205-5

November 25, 1998

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS	
			DATE	TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	11/22/98	15:39
3050B Digestion for Metals		JWK	11/20/98	
Total Solids	See Chain of Custody	DET	11/24/98	07:00
DATA PACKAGE		SMD	11/24/98	

Respectfully Submitted,

David W. Lane
Laboratory Manager

00015



**ANALYTICAL
LABORATORY SERVICES, INC.**

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Page # 1
Sample # U23229-1

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

November 25, 1998

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: O3562-LS-BB	Date Sampled	: 11/19/98 08:30 AM
Location	: BAIN 689 SE-3 DEL	Date Received	: 11/20/98
Sample State	: Soil Composite	Date Approved	: 11/25/98
Collector	: DB	Discard Date	:

TEST/PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
ALS				
TOTAL METALS BY ICP				
Lead	221	mg/kg	9.9	6010B
Lead	270	mg/kg	Dry Weight	
WATER QUALITY				
Total Solids	82.1	%	0.1	3540B

DATA PACKAGES
DATA PACKAGE NFESC Lev C

This report relates only to the samples as received by the laboratory, and may only be reproduced in full.

**** Continued ****



**ANALYTICAL
LABORATORY SERVICES, INC.**

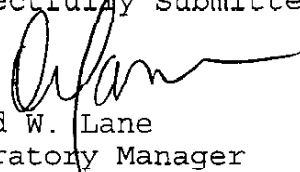
Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 2
Sample # U23229-1

November 25, 1998

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS	
			DATE	TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	11/22/98	15:39
3050B Digestion for Metals		JWK	11/20/98	
Total Solids	See Chain of Custody	DET	11/24/98	07:00
DATA PACKAGE		SMD	11/24/98	

Respectfully Submitted,


David W. Lane
Laboratory Manager

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ATTACHMENT D

Laboratory Reported Tentatively Identified Compounds

(Not Applicable)

ATTACHMENT E

Support Documentation

Analytical Laboratory Services Inc.
Analytical Narrative
OHM/IT-Bainbridge NTC
SDG-009

Sample Management

This report contains the results of the analysis of seven (7) soil samples collected on November 19 and 20, 1998. Analytical results and quality control information are summarized in this data package. The samples were analyzed as follows:

LAB ID	LOCATION	LEAD	TOTAL SOLIDS
U23205-1	BAIN 689 NE CON	*	*
U23205-2	BAIN 689 NE-1 CON	*	*
U23205-3	BAIN 689 SE CON	*	*
U23205-4	BAIN 689 SE-1 CON	*	*
U23205-5	BAIN 689 SE-2 CON	*	*
U23205-6	BAIN 689 NW CON	*	*
U23229-1	BAIN 689 SE-3 DEL	*	*

SAMPLE RECEIPT

Samples arrived at ALSI via laboratory courier on November 20, 1998. Upon receipt, the samples were inspected and compared to the enclosed chain of custody. Cooler receipt forms were filled out for the samples received. All sample bottles were preserved properly. Each sample was assigned a unique identification number (see above table). The sample information was entered into the computer system and the samples were released for analysis.

Metals

METALS by SW-846 Method 6010B

Sample handling. Seven (7) soil samples were digested by SW-846 Method 3050B. The digestates were analyzed for metals by ICP using SW-846 Method 6010B. The samples were digested and analyzed within the six month holding time established for this method.

Calibration. Initial six point calibrations were properly established and verified. On the day of analysis, a two point reslope of the initial calibration was performed which met the instrument manufacturer's requirements. A second source initial calibration standard was analyzed to verify the calibration. A laboratory control sample, identified as LSD0828-1, was digested and analyzed with this batch of samples. Recoveries were within the acceptable limits of 75-125%.

Blanks. A method blank, identified as SD0828-1 was digested and analyzed with the samples. No metals were detected in the prep blank.

Spikes. A matrix spike / matrix spike duplicate analysis was performed on sample U23205-1. Recoveries were 130% and 156%, which are not within the acceptable limits of 75-125%. The sample was post spiked on an additional run. The post spike recoveries were 102% and 104%, which are within the acceptable limits of 75-125%. A comment was placed on the lab report.

Duplicates. A duplicate sample was performed on sample U23205-6 with a relative percent difference of 55%. The acceptable %RPD of 20% could not be achieved due to the lack of homogeneity. A comment was placed on the lab report.

Wet Chemistry

Total Solids by SM 3540B

Sample handling. Seven (7) samples were analyzed for total solids by SM 3540B.



Remediation
Services Corp.

CHAIN-OF-CUSTODY RECORD

Quote # 9911-M-545

B23205

AR 11/20/98

LAB COPY
Form 0019
Field Technical Services
Rev. 08/89

UB2320580

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526

PROJECT NAME		PROJECT LOCATION		PROJECT NO.		PROJECT CONTACT		PROJECT TELEPHONE NO.		NUMBER OF CONTAINERS	ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS)										REMARKS								
BAINBRIDGE NTC		Port Deposit, MD		919562		DOBRA BURKH		410 378 3223			TOTAL LEAD																		
CLIENT'S REPRESENTATIVE		PROJECT MANAGER/SUPERVISOR		ITEM NO.		SAMPLE NUMBER		DATE		TIME		COMP		GRAB		SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)		ANALYSIS DESIRED		REMARKS									
FRANK ZEPKA <td colspan="2">LARRY STEARNS / CHAZ CRENSHAW <td colspan="2">1</td> <td colspan="2">BAIN 689 SE-319</td> <td colspan="2">11/19/98</td> <td colspan="2">0830</td> <td colspan="2">X</td> <td colspan="2"></td> <td colspan="2">3 pt composite from local area W/9 Brown opaque solid</td> <td colspan="2">1.42</td> <td colspan="10">24 hr TAT</td> </td>		LARRY STEARNS / CHAZ CRENSHAW <td colspan="2">1</td> <td colspan="2">BAIN 689 SE-319</td> <td colspan="2">11/19/98</td> <td colspan="2">0830</td> <td colspan="2">X</td> <td colspan="2"></td> <td colspan="2">3 pt composite from local area W/9 Brown opaque solid</td> <td colspan="2">1.42</td> <td colspan="10">24 hr TAT</td>		1		BAIN 689 SE-319		11/19/98		0830		X				3 pt composite from local area W/9 Brown opaque solid		1.42		24 hr TAT									
				2		BAIN 689 NE-CON		11/20/98		1100		X				6 pt composite CONFIRMATION Brown opaque solid 6"		1.42		3 day TAT									
				3		BAIN 689 NE-1 CON		11/20/98		1105		X				3 pt composite CONFIRMATION Brown opaque solid 6"		1.42		3 day TAT									
				4		BAIN 689 SE-CON		11/20/98		1110		X				6 pt composite CONFIRMATION Brown opaque solid 6"		1.42		3 day TAT									
				5		BAIN 689 SE-1 CON		11/20/98		1115		X				3 pt composite CONFIRMATION Brown opaque solid 6"		1.42		3 day TAT									
				6		BAIN 689 SE-2 CON		11/20/98		1120		X				3 pt composite CONFIRMATION Brown opaque solid 6"		1.42		3 day TAT									
				7		BAIN 689 NW CON		11/20/98		1125		X				6 pt composite CONFIRMATION Brown opaque solid 6"		1.42		3 day TAT									
				8																									
				9																									
				10																11/23/98 BR									

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
1	1-7	DOBRA	Rn D. H.	11-19-98	11:50	please fax results to 410 378 3232 please mail hard copy to Mike Lacy c/o OHM-IT 200 HORIZON CENTRE BLVD TRENTON NJ 08691
2		Rn K. J. C.				
3		MJ LAMIRATA ACS1	MJ Laminata	11/20/98	1700	
4						

00003

AR 11/20/98 19:17

Matrix Spike and Matrix Spike Duplicate Recovery Summary

SDG No.: SDG-009

Lab Sample ID:	U23205-1
Lab File ID:	112298
Instrument ID:	SPECTRO ICP
GC Column:	NA

[illegible][illegible]

D : Spikes diluted out

Comments: The results shown have not been corrected for moisture content.

OVERVIEW

Five (5) composite soil samples were analyzed for lead by EPA SW-846 Method 6010. No site-specific Quality Control samples were analyzed. Analytical Laboratory Services, located in Middletown, PA, performed the analyses.

SUMMARY

These samples were analyzed successfully.

MAJOR PROBLEMS

No major problems with the validity of the analytical data were found.

MINOR PROBLEMS

- Lead was recovered in both the matrix spike and matrix spike duplicate samples. However, the post digestion spike and laboratory control sample were recovered acceptably. The high recoveries were determined to be due to matrix effects, and the data were not qualified.
- The laboratory duplicate had a high relative percent difference. All lead data should be qualified estimated (J).

NOTES

There are no notes associated with this validation report.

REPORT CONTENT STATEMENT

These data were reviewed in accordance with USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses. The text of this report only addresses items that affect the validity of the data contained therein.

ATTACHMENT A

Glossary of Data Qualifiers

Glossary of Data Qualifier Codes

Codes Relating to Identification

(Confidence Concerning Presence or Absence of Compounds)

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(No Code) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm the presence or absence in future sampling efforts.

Codes Related to Quantitation

(Can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

Other Codes

Q = No analytical result.

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

ATTACHMENT B

Data Summary Forms

Site: FNTC - Bainbridge - Water Tower at Buildings 689 & 1054 Confirmation Results

Lab: Accutest

Reviewer: Michael J. Lacy, Ph.D.

Date: 18 October 1999

Report Number: SDG-021

Sample I.D.	Bain689SECon2		Bain689NW1Con		Bain1054NECon		Bain1054SECon		Bain1054NWCon		Bain1054NW1Con	
Matrix	Soil		Soil		Soil		Soil		Soil		Soil	
Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Date Sampled	12/8/1998		12/8/1998		12/9/1998		12/9/1998		12/9/1998		12/9/1998	
Time Sampled	0755		0800		1530		1535		1550		1600	
% Moisture	13.3		14.0		15.8		16.5		17.6		13.6	
pH	N/A		N/A		N/A		N/A		N/A		N/A	
Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0	
	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ
Lead	130		260		180		120		240		53	

VQ - Validation Qualifier

ATTACHMENT C

Laboratory Reported Results



**ANALYTICAL
LABORATORY SERVICES, INC.**

Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 1
Sample # U24330-1

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

December 16, 1998

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: O3562-LS-BB	Date Sampled	: 12/09/98 03:30 PM
Location	: BAIN 1054 NE CON	Date Received	: 12/10/98
Sample State	: Soil Composite	Date Approved	: 12/16/98
Collector	: DB	Discard Date	:

TEST/PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
ALS				
TOTAL METALS BY ICP				
Lead	150	mg/kg	10	6010B
Lead	180	mg/kg	Dry Weight	
WATER QUALITY				
Total Solids	84.2	%	0.1	3540B

DATA PACKAGES
DATA PACKAGE NFESC Lev C

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**** Continued ****

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**ANALYTICAL
LABORATORY SERVICES, INC.**

Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 2
Sample # U24330-1

December 16, 1998

QUALITY ASSURANCE REPORT

Q/A PARAMETER	RESULT
WATER QUALITY	
Total Solids	83.8 % Duplicate

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS DATE TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	12/15/98 19:12
3050B Digestion for Metals		JBH	12/11/98
Total Solids	See Chain of Custody	SLP	12/11/98 15:23
DATA PACKAGE		SJS	12/16/98

Respectfully Submitted,

David W. Lane
Laboratory Manager

00013



**ANALYTICAL
LABORATORY SERVICES, INC.**

Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 1
Sample # U24330-2

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

December 16, 1998

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: 03562-LS-BB	Date Sampled	: 12/09/98 03:35 PM
Location	: BAIN 1054 SE CON	Date Received	: 12/10/98
Sample State	: Soil Composite	Date Approved	: 12/16/98
Collector	: DB	Discard Date	:

TEST/PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
ALS				
TOTAL METALS BY ICP				
Lead	100	mg/kg	10	6010B
Lead	120	mg/kg	Dry Weight	
WATER QUALITY				
Total Solids	83.5	%	0.1	3540B

DATA PACKAGES
DATA PACKAGE NFESC Lev C

This report relates only to the samples as received by the laboratory, and may only be reproduced in full.

**** Continued ****

00014



**ANALYTICAL
LABORATORY SERVICES, INC.**

Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 2
Sample # U24330-2

December 16, 1998

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS	
			DATE	TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	12/15/98	19:12
3050B Digestion for Metals		JBH	12/11/98	
Total Solids	See Chain of Custody	SLP	12/11/98	15:23
DATA PACKAGE		SJS	12/16/98	

Respectfully Submitted,

David W. Lane
Laboratory Manager

00015



**ANALYTICAL
LABORATORY SERVICES, Inc.**

Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 1
Sample # U24330-4

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

December 16, 1998

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: 03562-LS-BB	Date Sampled	: 12/09/98 03:50 PM
Location	: BAIN 1054 NW CON	Date Received	: 12/10/98
Sample State	: Soil Composite	Date Approved	: 12/16/98
Collector	: DB	Discard Date	:

<u>TEST/PARAMETER</u>	<u>RESULT</u>	<u>UNITS</u>	<u>REPORTING LIMIT</u>	<u>METHOD</u>
ALS				
TOTAL METALS BY ICP				
Lead	200	mg/kg	10	6010B
Lead	240	mg/kg	Dry Weight	
WATER QUALITY				
Total Solids	82.4	%	0.1	3540B

DATA PACKAGES
DATA PACKAGE NFESC Lev C

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**** Continued ****

00018



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Page # 2
Sample # U24330-4

December 16, 1998

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS	
			DATE	TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	12/15/98	19:12
3050B Digestion for Metals		JBH	12/11/98	
Total Solids	See Chain of Custody	SLP	12/11/98	15:23
DATA PACKAGE		SJS	12/16/98	

Respectfully Submitted,

David W. Lane
Laboratory Manager

00019



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Page # 1
Sample # U24330-5

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

December 16, 1998

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: 03562-LS-BB	Date Sampled	: 12/09/98 04:00 PM
Location	: BAIN 1054 NW-1 CON	Date Received	: 12/10/98
Sample State	: Soil Composite	Date Approved	: 12/16/98
Collector	: DB	Discard Date	:

TEST/PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
ALS				
TOTAL METALS BY ICP				
Lead	46	mg/kg	6.0	6010B
Lead	53	mg/kg	Dry Weight	
WATER QUALITY				
Total Solids	86.4	%	0.1	3540B
DATA PACKAGES				
DATA PACKAGE	NFESC Lev C			

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**** Continued ****



**ANALYTICAL
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Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 2
Sample # U24330-5

December 16, 1998

QUALITY ASSURANCE REPORT

Q/A PARAMETER	RESULT
---------------	--------

METALS

TOTAL METALS BY ICP

Lead	39 ²	mg/kg	Duplicate
------	-----------------	-------	-----------

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS DATE	TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	12/15/98	19:12
3050B Digestion for Metals		JBH	12/11/98	
al Solids	see Chain of Custody	SLP	12/11/98	15:23
DATA PACKAGE		SJS	12/16/98	

Respectfully Submitted,

David W. Lane
Laboratory Manager



**ANALYTICAL
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Page # 2
Sample # U24974-3

December 29, 1998

QUALITY ASSURANCE REPORT

Q/A PARAMETER	RESULT
---------------	--------

METALS

TOTAL METALS BY ICP

Lead	20	mg/kg	Duplicate
------	----	-------	-----------

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSTS DATE TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	12/23/98 10:39
300B Digestion for Metals		JBH	12/22/98
Total Solids	See Chain of Custody	PAM	12/22/98 10:00
DATA PACKAGE		SMD	12/22/98

Respectfully Submitted,

David W. Lane
Laboratory Manager

000010

ATTACHMENT D

Laboratory Reported Tentatively Identified Compounds

(Not Applicable)

ATTACHMENT E

Support Documentation

Analytical Laboratory Services Inc.
Analytical Narrative
OHM/IT-Bainbridge NTC
SDG-021

SAMPLE MANAGEMENT

This report contains the results of the analysis of eight (8) soil samples collected on December 8 and 9, 1998. Analytical results and quality control information are summarized in this data package. The samples were analyzed as follows:

LAB ID	LOCATION	LEAD	TOTAL SOLIDS
U24323-1	BAIN 689 NW CON 2	*	*
U24323-2	BAIN 689 SE CON 2	*	*
U24323-3	BAIN 689 NW-1 CON	*	*
U24330-1	BAIN 1054 NE-CON	*	*
U24330-2	BAIN 1054 SE CON	*	*
U24330-3	BAIN 1054 SW CON	*	*
U24330-4	BAIN 1054 NW CON	*	*
U24330-5	BAIN 1054 NW-1 CON	*	*

SAMPLE RECEIPT

Samples arrived at ALSI via laboratory courier on December 10, 1998. Upon receipt, the samples were inspected and compared to the enclosed chain of custody. Cooler receipt forms were filled out for the samples received. All sample bottles were preserved properly. Each sample was assigned a unique identification number (see above table). The sample information was entered into the computer system and the samples were released for analysis.

LEAD by ICP SW-846 Method 6010B

Sample handling. Eight (8) soil samples were digested by SW-846 Method 3050B. Digestates were analyzed for metals by ICP, using SW-846 Method 6010B. The samples were digested and analyzed within the six month holding time established for this method.

Calibration. Method calibrations are performed every six months according to instrument manufacturer's standards. A high standard and a blank are run daily. In addition, second source continuing calibration standards are analyzed to verify the calibration. Laboratory

controls sample (LCS), identified as LSD0835-1, was digested and analyzed with this batch of samples. The LCS was within the acceptable limits of 70-130% for lead.

Blanks. The method blank, identified as SD0835-1, was digested and analyzed with these samples. No metals were detected in the blanks.

Spikes. A matrix spike / matrix spike duplicate analysis was performed on sample U24323-1. Recovery was not within acceptable limits of 75-125% for lead. A post digestion spike was performed on a tenfold dilution of this sample, but not reported because the sample concentration was greater than ten times the spiking amount. The relative percent difference (RPD) between the two post digestion spikes performed was within 20% for lead.

Duplicates. A prep duplicate was performed on sample U24330-5. The relative percent (RPD) between the sample and the duplicate was within 20 % for lead.

Total Solids by SM 3540B

Sample handling. Eight (8) soil samples were analyzed for total solids by SM 3540B.

Duplicates. A duplicate analysis was performed on sample BAIN 1054 NE CON. The relative percent difference was within 5%, the acceptable limit.



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Page # 1
Sample # U24323-2

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

December 16, 1998

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: 03562-LS-BB	Date Sampled	: 12/08/98 07:55 AM
Location	: BAIN 689 SE CON 2	Date Received	: 12/10/98
Sample State	: Soil Composite	Date Approved	: 12/16/98
Collector	: DB	Discard Date	:

TEST/PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
ALS				
TOTAL METALS BY ICP				
Lead	110	mg/kg	9.9	6010B
Lead	130	mg/kg	Dry Weight	
WATER QUALITY				
Total Solids	86.6	%	0.1	3540B

DATA PACKAGES
DATA PACKAGE NFESC Lev C

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**** Continued ****

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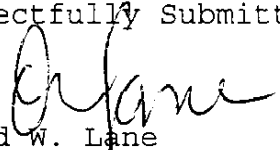
Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 2
Sample # U24323-2

December 16, 1998

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS	
			DATE	TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	12/15/98	19:12
3050B Digestion for Metals		JBH	12/11/98	
Total Solids	See Chain of Custody	SLP	12/11/98	15:23
DATA PACKAGE		SJS	12/16/98	

Respectfully Submitted,


David W. Lane
Laboratory Manager



**ANALYTICAL
LABORATORY SERVICES, INC.**

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Page # 1
Sample # U21323-3

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

December 16, 1998

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: 03562-LS-BB	Date Sampled	: 12/08/98 08:00 AM
Location	: BAIN 689 NW-1 CON	Date Received	: 12/10/98
Sample State	: Soil Composite	Date Approved	: 12/16/98
Collector	: DB	Discard Date	:

TEST/PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
ALS				
TOTAL METALS BY ICP				
Lead	220	mg/kg	10	6010B
Lead	260	mg/kg	Dry Weight	
WATER QUALITY				
Total Solids	86.0	%	0.1	3540B

DATA PACKAGES
DATA PACKAGE NFESC Lev C

This report relates only to the samples as received by the laboratory, and may only be reproduced in full.

**** Continued ****

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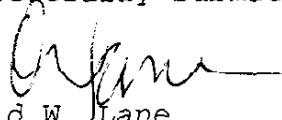
Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 2
Sample # U24323-3

December 16, 1998

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS	
			DATE	TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	12/15/98	19:12
3050B Digestion for Metals		JBH	12/11/98	
Total Solids	See Chain of Custody	SLP	12/11/98	15:23
DATA PACKAGE		SJS	12/16/98	

Respectfully Submitted,


David W. Lane
Laboratory Manager

Form 3A

Matrix Spike and Matrix Spike Duplicate Recovery Summary

Analysis Method: 6010B

SDG No.: SDG-021

Matrix (soil/water): SOIL

Lab Sample ID: U24323-1

Units: mg/kg

Lab File ID: 121598

% moisture: NA

Instrument ID: SPECTRO ICP

Date Analyzed: 12/15/98

GC Column: NA

Analyte	Spike Added	Sample Concentration	MS Concentration	MS Recovery (%)	(1)	Acceptable Limits (%)
LEAD	100	2280	1250	-1030	*	75-125

Analyte	Spike Added	MSD Concentration	MS Recovery (%)	(1)	Acceptable Limits (%)	RPD (%)	(1)	Acc. Lim. (%)
LEAD	100	2570	290	*	75-125	69.1	*	20

(1) The following qualifiers are used:

* : Values outside of acceptable limits

D : Spikes diluted out

Comments: Results shown are not corrected for moisture content.

CHAIN-OF-CUSTODY RECORD

CAR 12/10/98
0321330
196582

O.H. MATERIALS CORP.				P.C. BOX 551				FINDLAY, OH 45839-0551				419-423-3526			
PROJECT NAME BAINBRIDGE NR						PROJECT LOCATION PORT DEPOSIT, MD						ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS)		NUMBER OF CONTAINERS	
PROJ. NO. 919508		PROJECT CONTACT DEBRA BURLETT				PROJECT TELEPHONE NO. 410 378 3223									
CLIENT'S REPRESENTATIVE FRANK ZEPKA						PROJECT MANAGER/SUPERVISOR LARRY STEPHENS / BAZ CRUSHAW									
ITEM NO.						SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)									
SAMPLE NUMBER		DATE	TIME	COMP	GRAB	REMARKS									
1	BAIN 689 NN CON 2	12/9/98	0750	X		BRAIN SOIL FROM WARE TOWER 689 2ND CONFIRMATION SAMPLE - AFTER 2ND EXCAVATION 1.4/2 X						Left composite			
2	BAIN 689 SE CON 2	12/9/98	0755	X		BRAIN SOIL FROM WARE TOWER 689 2ND CONFIRMATION SAMPLE - AFTER 2ND EXCAVATION 1.4/2 X						Left composite			
3	BAIN 689 NN-1 CON	12/9/98	0800	X		BRAIN SOIL FROM WARE TOWER 689 CONFIRMATION SAMPLE AFTER 1ST 6" REMOVAL 1.4/2 X						3 pt composite			
1	BAIN 1054 NE CON	12/9/98	1530	X		BRAIN SOIL FROM WARE TOWER 1054 CONFIRMATION SAMPLE AFTER 1ST 6" EXCAVATION 1.4/2 X						Left composite			
2	BAIN 1054 SE CON	12/9/98	1535	X		BRAIN SOIL FROM WARE TOWER 1054 CONFIRMATION SAMPLE AFTER 1ST 6" EXCAVATION 1.4/2 X						Left composite			
3	BAIN 1054 SW CON	12/9/98	1545	X		BRAIN SOIL FROM WARE TOWER 1054 CONFIRMATION SAMPLE AFTER 1ST 6" EXCAVATION 1.4/2 X						Left composite			
4	BAIN 1054 NW CON	12/9/98	1550	X		BRAIN SOIL FROM WARE TOWER 1054 CONFIRMATION SAMPLE AFTER 1ST 6" EXCAVATION 1.4/2 X						Left composite			
5	BAIN 1054 NW-1 CON	12/9/98	1600	X		BRAIN SOIL FROM WARE TOWER 1054 CONFIRMATION SAMPLE AFTER 1ST 6" EXCAVATION 1.4/2 X						3 pt composite			
9															
10															
TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY				TRANSFERS ACCEPTED BY				DATE	TIME	REMARKS			
1	1-8	DBM				W. J. Braham				12/10	1127	3 day TAT please fax results to M. Lacy 609-598-6403 * D. BURKE 410 378 3232 please mail hard copy to MIKE LACY c/o OHM CORP 200 HORIZON EASTER BLVD TRENTON NJ 08691			
2	1-8	wjs										ENTERED 12/14/98			
3												SAMPLER'S SIGNATURE DBM			

00003

AP 12/10/98 21:17

OVERVIEW

Three (3) composite soil samples were analyzed for lead by EPA SW-846 Method 6010. No site-specific Quality Control samples were analyzed. Analytical Laboratory Services, located in Middletown, PA, performed the analyses.

SUMMARY

These samples were analyzed successfully.

MAJOR PROBLEMS

No major problems with the validity of the analytical data were found.

MINOR PROBLEMS

- Lead was recovered in both the matrix spike and matrix spike duplicate samples. However, the post digestion spike and laboratory control sample were recovered acceptably. The high recoveries were determined to be due to matrix effects, and the data were not qualified.

NOTES

- The duplicate sample had a concentration of 20 mg/kg, compared to the original concentration of 21 mg/kg.

REPORT CONTENT STATEMENT

These data were reviewed in accordance with USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses. The text of this report only addresses items that affect the validity of the data contained therein.

ATTACHMENT A

Glossary of Data Qualifiers

Glossary of Data Qualifier Codes

Codes Relating to Identification

(Confidence Concerning Presence or Absence of Compounds)

U = Not Detected. The associated number indicates the approximate sample concentration necessary to be detected.

(No Code) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm the presence or absence in future sampling efforts.

Codes Related to Quantitation

(Can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

Other Codes

Q = No analytical result.

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

ATTACHMENT B

Data Summary Forms

Site: FNTC - Bainbridge - Water Tower at Buildings 689 & 1054 Confirmation Results
 Lab: Accutest
 Reviewer: Michael J. Lacy, Ph.D.
 Date: 18 October 1999
 Report Number: SDG-025

Sample I.D.	Bain689NWCon3		Bain689SE1Con2		Bain1054SWCon2	
Matrix	Soil		Soil		Soil	
Units	mg/kg		mg/kg		mg/kg	
Date Sampled	12/18/1998		12/18/1998		12/18/1998	
Time Sampled	1050		1040		1120	
% Moisture	13.0		7.6		11.8	
pH	N/A		N/A		N/A	
Dilution Factor	1.0		1.0		1.0	
	Result	VQ	Result	VQ	Result	VQ
Lead	24	J	79	J	110	J

ATTACHMENT C

Laboratory Reported Results



**ANALYTICAL
LABORATORY SERVICES, INC.**

Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 1
Sample # U24974-1

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

December 29, 1998

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: 03562-LS-BB	Date Sampled	: 12/18/98 11:20 AM
Location	: BAIN 1054 SW CON 2	Date Received	: 12/21/98
Sample State	: Soil Composite	Date Approved	: 12/29/98
Collector	: DB	Discard Date	:

TEST/PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
METALS				
TOTAL METALS BY ICP				
Lead	93	mg/kg	10	6010B
Lead	110	mg/kg	Dry Weight	
WATER QUALITY				
Total Solids	88.2	%	0.1	3540B

DATA PACKAGES
DATA PACKAGE NFESC Lev C

Due to the failure of the matrix prep spikes, the sample was post-spiked to demonstrate that there were no matrix interferences. The acceptable spike limits according to approved EPA methods for 6010B are 75-125%.

**** Continued ****

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**ANALYTICAL
LABORATORY SERVICES, INC.**

Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 2
Sample # U24974-1

December 29, 1998

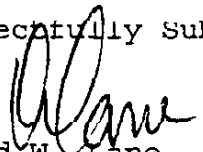
This report relates only to the samples as received by the laboratory, and may only be reproduced in full.

QUALITY ASSURANCE REPORT

Q/A PARAMETER	RESULT		
METALS			
TOTAL METALS BY ICP			
Lead	130	% Recovery	Spike
Lead	206	% Recovery	Spike
Lead	102	% Recovery	Spike
Lead	107	% Recovery	Spike
WATER QUALITY			
Total Solids	89.3	%	Duplicate

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS	
			DATE	TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	12/23/98	10:39
3050B Digestion for Metals		JBH	12/22/98	
Total Solids	See Chain of Custody	PAM	12/22/98	10:00
DATA PACKAGE		SMD	12/22/98	

Respectfully Submitted,


David W. Lane
Laboratory Manager

000006



**ANALYTICAL
LABORATORY SERVICES, INC.**

Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 1
Sample # U24974-2

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

December 29, 1998

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: 03562-LS-BB	Date Sampled	: 12/18/98 10:40 AM
Location	: BAIN 689 SE-1 CON 2	Date Received	: 12/21/98
Sample State	: Soil Grab	Date Approved	: 12/29/98
Collector	: DB	Discard Date	:

TEST/PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
METALS				
TOTAL METALS BY ICP				
Lead	73	mg/kg	10	6010B
Lead	79	mg/kg	Dry Weight	
WATER QUALITY				
Total Solids	92.4	%	0.1	3540B

DATA PACKAGES
DATA PACKAGE NFESC Lev C

This report relates only to the samples as received by the laboratory, and may only be reproduced in full.

**** Continued ****

000007



**ANALYTICAL
LABORATORY SERVICES, INC.**

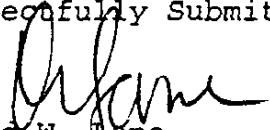
Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 2
Sample # U24974-2

December 29, 1998

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS	
			DATE	TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	12/23/98	10:39
3050B Digestion for Metals		JBH	12/22/98	
Total Solids	See Chain of Custody	PAM	12/22/98	10:00
DATA PACKAGE		SMD	12/22/98	

Respectfully Submitted,


David W. Lane
Laboratory Manager

000008



**ANALYTICAL
LABORATORY SERVICES, INC.**

Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 1
Sample # U24974-3

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

December 29, 1998

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: 03562-LS-BB	Date Sampled	: 12/18/98 10:50 AM
Location	: BAIN 689 NW CON 3	Date Received	: 12/21/98
Sample State	: Soil Composite	Date Approved	: 12/29/98
Collector	: DB	Discard Date	:

TEST/PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
ALS				
TOTAL METALS BY ICP				
Lead	21	mg/kg	10	6010B
Lead	24	mg/kg	Dry Weight	
WATER QUALITY				
Total Solids	87.0	%	0.1	3540B
DATA PACKAGES				
DATA PACKAGE	NFESC Lev C			

This report relates only to the samples as received by the laboratory, and may only be reproduced in full.

**** Continued ****

ATTACHMENT D

Laboratory Reported Tentatively Identified Compounds

(Not Applicable)

ATTACHMENT E

Support Documentation

Analytical Laboratory Services Inc.
Analytical Narrative
OHM/IT-Bainbridge NTC
SDG-025

SAMPLE MANAGEMENT

This report contains the results of the analysis of six (6) soil samples collected on December 18, 1998. Analytical results and quality control information are summarized in this data package. The samples were analyzed as follows:

LAB ID	LOCATION	LEAD	PESTICIDES	TOTAL SOLIDS
U24974-1	BAIN 1054 SW CON2	*		*
U24974-2	BAIN 689 SE-1 CON2	*		*
U24974-3	BAIN 689 NW CON3	*		*
U24974-4	BAIN 683 E6-1		*	*
U24974-5	BAIN 683 E8-1		*	*
U24974-6	BAIN 683 D6-2		*	*

SAMPLE RECEIPT

Samples arrived at ALSI via laboratory courier on December 19, 1998. Upon receipt, the samples were inspected and compared to the enclosed chain of custody. Cooler receipt forms were filled out for the samples received. All sample bottles were preserved properly. Each sample was assigned a unique identification number (see above table). The sample information was entered into the computer system and the samples were released for analysis.

Pesticides by 8081A

Samples. Samples in this deliverable group were extracted by EPA Method 3550B and flurosil cleaned by Method 3620C. Sample BAIN 1054 SW CON2 (U24974-1) was lost during the initial clean-up, so it was re-extracted. All extractions and clean-ups were performed within the fourteen day hold time recommended by the method. The sample extract were analyzed by Method 8081A within forty days of extraction as recommended by the method.

Blanks. The method blanks associated with the 8081A samples in this deliverable group were PP456-1 and PP457Y-1. There were no detections in the method blanks. The method blank summary forms are enclosed.

C00021

Calibration. The samples in this deliverable group were analyzed under two sets of initial calibrations. Samples BAIN683E8-1 and BAIN683D6-2 were analyzed under calibrations conducted on December 23, 1998. BAIN683E6-1 was analyzed under the initial calibrations conducted on December 30, 1998. The appropriate initial calibration forms for the primary analytical column are enclosed.

Surrogates. Surrogate recovery forms are enclosed. Surrogate recoveries were acceptable for the samples in this deliverable group.

LCS. PP456-1LCS and PP457Y-1LCS were the laboratory control samples extracted with the samples in this group. The appropriate summary forms are enclosed. All recoveries were acceptable.

Matrix Spike. Matrix spikes of the samples in this deliverable group were not analyzed. The samples were analyzed at large dilutions due to sample matrix.

Detections. 4,4'-DDT, 4,4'-DDE, and 4,4'-DDD were tentatively identified on the primary column (RTX-5) in one or more samples in this group. Qualitative verification was provided on a second column of dissimilar phase (RTX-CLPest).

Interferences. The sample extracts were analyzed at a dilution in the pesticides analysis due to sample matrix.

Miscellaneous. A high bias was observed for the target analyte heptachlor in the closing calibration verification check standards following the samples in this deliverable group. Heptachlor was not detected in the samples in this group. Method 8000B specifies that have a high bias with no detections is acceptable. Samples were not re-analyzed.

TOTAL METALS by SW-846 Method 6010B

Sample handling. Three (3) soil samples were digested by SW-846 Method 3050B. Digestates were analyzed for metals by SW-846 Method 6010B. The samples were digested and analyzed within the six month holding time established for this method.

Calibration. Method calibrations are performed every six months according to instrument manufacturer's standards. A high standard and a blank are run daily. In addition, second source continuing calibration standards are analyzed to verify the calibration. The laboratory control sample (LCS), identified as LSD0838-1, was digested and analyzed with this batch of samples. The LCS was within the acceptable limits of 75-125% for lead.

Blanks. The method blank, identified as SD0838-1, was digested and analyzed with these samples. No metals were detected in the blank.

000022

Spikes. A matrix spike / matrix spike duplicate analysis was performed on sample U24974-1. The matrix spike and matrix spike duplicate recoveries were not within acceptable limits of 75-125% for lead due to the sample matrix, therefore post spikes were done. The post spikes were analyzed and they were within the acceptable limits of 75-125%. A comment was added to the lab report.

Duplicates. A prep duplicate was performed on sample U24974-3. The relative percent difference (RPD) between the sample and the duplicate was within 20 % for lead.

TOTAL SOLIDS by SM 3540B

Sample handling. Six (6) soil samples were analyzed for total solids by SM 3540B.

Duplicates. A duplicate analysis was performed on sample BAIN 1054 SW CON 2. The relative percent difference was within 5%, the acceptable limit.

CHAIN-OF-CUSTODY RECORD

34 Lexington Ave
Middleton, PA 17057
717 944 5511

TRANSFER 3

Form 0019
Field Technical Services
Rev. 08/89

190584

Note # 4911-M-545

O.H. MATERIALS CORP. • P.O. BOX 551 • FINDLAY, OH 45839-0551 • 419-423-3526										
PROJECT NAME BAINBRIDGE NTC				PROJECT LOCATION PORT DEPOSIT, MD				NUMBER OF CONTAINERS	ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS)	REMARKS
PROJ. NO. 919505		PROJECT CONTACT DEBRA BURKH		PROJECT TELEPHONE NO. 410 376 3223						
CLIENT'S REPRESENTATIVE FRANK ZEPKA				PROJECT MANAGER/SUPERVISOR LARRY SEDENS / CHAZ CRESSWELL						
ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)				
1	BAIN 1054 SW CONC	12/18/98	1120	X		BROWN SOIL FROM WATER TOWER 1054 5pt composite AFTER 2nd 6" EXCAVATION		1/4/02	X	
2	BAIN 684 SE-1 CONC	12/18/98	1040		X	BROWN SOIL FROM WATER TOWER 684 GRAB SAMPLE NO RECONSTRUCTION, JUST SAMPLE		1/4/02	X	
3	BAIN 689 NW CONC 3	12/18/98	1050	X		BROWN SOIL FROM WATER TOWER 5pt composite AFTER 3rd 6" EXCAVATION		1/4/02	X	
4	BAIN 683 CB-1	12/18/98	1200		X	ASPHALT GRID 68 PRE EXCAVATION		1/4/02	X	
5	BAIN 683 ES-1	12/18/98	1215		X	ASPHALT GRIDES PRE EXCAVATION		1/4/02	X	
6	BAIN 683 DB-2	12/18/98	1230		X	ASPHALT GRID 68 PRE EXCAVATION		1/4/02	X	
7										
8										
9										
10										

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
1	1-6	DEBRA BURKH	TO ANALYTICAL LABORATORY 80702 410 576 3222	12/18/98	1700	3 DAY TAT please fax results w/ copy to 576 3222 AND DEBRA BURKH 410 576 3222 please email hard copy to Action Log c/o OHM 200 Lexington Ave TRENTON, NJ 08611
		Jeffrey H. Schwartz	ACSI	12-21-98	9:15AM	

SAMPLER'S SIGNATURE
DEBRA BURKH

Form 3A

Matrix Spike and Matrix Spike Duplicate Recovery Summary

Analysis Method: 6010B

SDG No.: SDG-025

Matrix (soil/water): Soil

Lab Sample ID: U24974-1

Units: mg/kg

Lab File ID: 122396

% moisture: NA

Instrument ID: SPECTRO D ICP

Date Analyzed: 12/23/98

GC Column: NA

Analyte	Spike Added	Sample Concentration	MS Concentration	MS Recovery (%)	(1)	Acceptable Limits (%)
LEAD	100	93	223	130	*	75-125

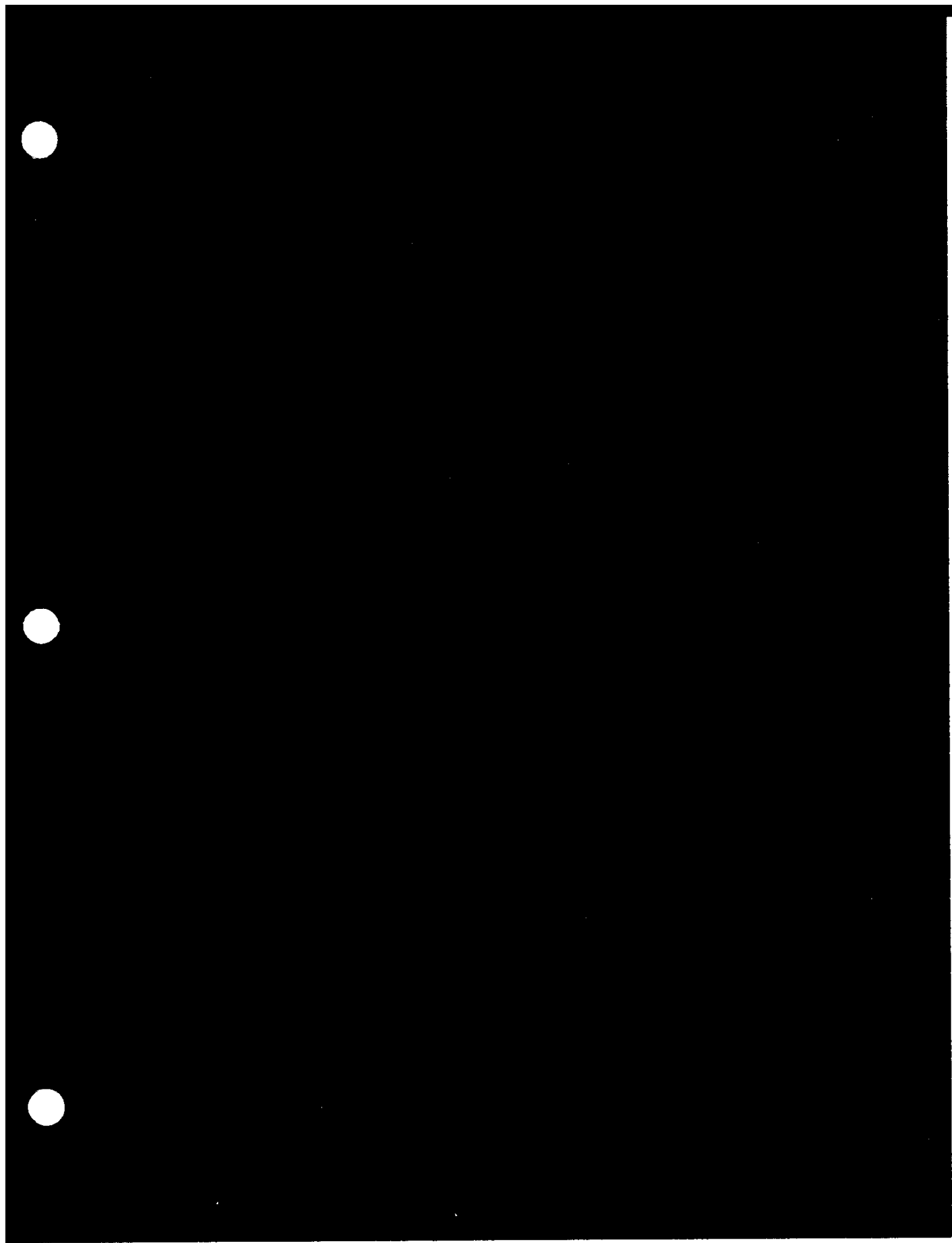
Analyte	Spike Added	MSD Concentration	MS Recovery (%)	(1)	Acceptable Limits (%)	RPD (%)	(1)	Acc. Lim. (%)
LEAD	100	299	206	*	75-125	29.1	*	20

(1) The following qualifiers are used:

* : Values outside of acceptable limits

D : Spikes diluted out

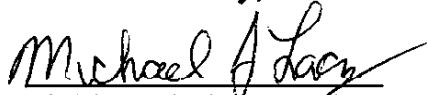
Comments: Results shown have not been corrected for moisture content.



DATE: October 20, 1999

SUBJECT: Data Validation for
Former Naval Training Center-Bainbridge
Port Deposit, Maryland

FROM: Michael J. Lacy, Ph.D.

A handwritten signature in cursive script, reading "Michael J. Lacy", written over a horizontal line.

Field Analytical Services Manager
IT Corporation – Trenton, New Jersey

TO: Mary Cooke – Project Contact
Hazardous Site Cleanup Division, 3HS13

OVERVIEW

Eleven (11) soil samples were analyzed for lead by EPA SW-846 Method 6010. Eight of these samples were then analyzed for TAL metals by Methods 6010/7471. No site- specific Quality Control samples were analyzed. Accutest, located in Orlando, FL, performed the analyses.

SUMMARY

These samples were analyzed successfully.

MAJOR PROBLEMS

No major problems with the validity of the analytical data were found.

MINOR PROBLEMS

- The lead-only method blank contained lead at greater than the instrument detection limit. Sample results with concentrations less than five (5) times the blank concentration are qualified as blank contaminated (B).
- Lead was recovered very low (<30%) in the matrix spike sample associated with samples -262C, -276C, -01C, -46C, -98C, -155C and -37C. The positive results for these samples will be qualified biased low (L). The TAL metals antimony, arsenic, calcium, cobalt, lead, potassium, sodium, thallium and vanadium were recovered out of control in the matrix spike sample associated with the samples -01C, -46C, -37C, -34C, -09C, -14C and -119C. All will be qualified low, except lead, which will be qualified high (K).
- The lead-only serial dilution sample associated with samples -262C, -276C, -01C, -46C, -98C, -155C and -37C was recovered high. The TAL metals serial dilution sample associated with samples -262C, -01C, -46C, -37C, -34C, -09C, -14C and -119C had an elevated recovery of aluminum, barium, calcium, chromium, iron, lead, magnesium, manganese, potassium, vanadium and zinc. The results for this analytes should be qualified estimated (J).

NOTES

- Lead was recovered low in the matrix spike and matrix spike duplicate associated with samples -34C, -09C, -14C and -119C. The sample concentrations were more than four (4) times the spike concentration.
- The average relative percent difference between the total lead results and lead results from the TAL metals analyses for the eight (8) samples that had both analyses performed is 16.6 percent

REPORT CONTENT STATEMENT

These data were reviewed in accordance with USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses. The text of this report only addresses items that affect the validity of the data contained therein.

ATTACHMENT A

Glossary of Data Qualifiers

Glossary of Data Qualifier Codes

Codes Relating to Identification

(Confidence Concerning Presence or Absence of Compounds)

U = Not Detected. The associated number indicates the approximate sample concentration necessary to be detected.

(No Code) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm the presence or absence in future sampling efforts.

Codes Related to Quantitation

(Can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

Other Codes

Q = No analytical result.

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

ATTACHMENT B

Data Summary Forms

Data Summary Table

1 of 1

Site: FNTC - Bainbridge - Small Arms Ranges Confirmation Results

Lab: Accutest

Reviewer: Michael J. Lacy, Ph.D.

Date: 21 October 1999

Report Number: F4951

Sample I.D.	707-262C		707-276C		707-01C		707-46C		707-98C		707-155C		304-37C		304-34C		304-09C		304-14C		304-119C	
Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Date Sampled	9/23/99		9/23/99		9/23/99		9/23/99		9/23/99		9/23/99		9/23/99		9/23/99		9/23/99		9/23/99		9/23/99	
Time Sampled	1127		1130		1445		1448		1451		1454		1645		1650		1655		1700		1705	
% Moisture	10.0		10.7		13.5		15.0		9.9		15.4		5.2		9.2		9.1		9.9		6.7	
pH	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ
Lead	37.1	JL	18.9	JL	65.6	JL	63.1	JL	41.8	JL	19.1	JL	7.8	JL	9.2	J	10.3	J	8.2	J	4.7	J

Aluminum	---	---	19500	---	15400	J	13700	J	---	---	---	---	14100	J	13400	J	18500	J	15600	J	18200	J
Antimony	---	---	0.68	JB	4.1	JBL	0.36	JBL	---	---	---	---	1.3	JL	0.78	JL	0.85	JL	0.85	JL	0.48	JL
Arsenic	---	---	3.0	B	3.0	BL	2.3	BL	---	---	---	---	3.9	L	2.3	L	4.5	L	4.1	L	0.52	JL
Barium	---	---	42.1	---	40.2	J	39.8	J	---	---	---	---	30.9	J	44.6	J	36	J	35.3	J	33.1	J
Beryllium	---	---	0.79	B	0.77	B	0.83	B	---	---	---	---	0.55	---	0.74	---	0.81	---	0.88	---	0.75	---
Cadmium	---	---	<0.04	U	<0.04	U	<0.04	U	---	---	---	---	<0.03	U	<0.04	U	<0.03	U	<0.03	U	<0.04	U
Calcium	---	---	321	J	236	JBL	261	JBL	---	---	---	---	870	JL	1410	JL	387	JL	448	JL	575	JL
Chromium	---	---	20.6	---	7.8	JB	5.4	JB	---	---	---	---	24.1	J	15.0	J	20	J	16.6	J	3.8	J
Cobalt	---	---	5.3	B	3.4	JBL	3.9	JBL	---	---	---	---	3.7	JL	6.7	JL	6.5	JL	9.5	JL	1.7	JL
Copper	---	---	5.9	---	4.5	---	2.8	---	---	---	---	---	5.3	---	6.3	---	112	---	10.1	---	5.8	---
Iron	---	---	16800	---	13000	J	10600	J	---	---	---	---	22400	J	15400	J	22800	J	2100	J	9000	J
Lead	---	---	28.1	B	67.6	JK	68.0	JK	---	---	---	---	10.8	JK	10.2	JK	122	JK	8.9	JK	5.5	JK
Magnesium	---	---	1310	---	1110	J	820	J	---	---	---	---	783	J	1510	J	2140	J	1750	J	1210	J
Manganese	---	---	64.8	---	56.9	J	44.1	J	---	---	---	---	70.2	J	115	J	140	J	261	J	29.3	J
Mercury	---	---	0.01	J	0.01	J	0.02	J	---	---	---	---	0.05	J	0.01	J	0.01	J	0.02	J	<0.01	UJ
Nickel	---	---	8.5	B	4.5	B	4.1	JB	---	---	---	---	7.1	---	7.8	---	102	---	8.7	---	2.2	J
Potassium	---	---	734	---	1070	JL	633	JL	---	---	---	---	449	JL	668	JL	973	JL	988	JL	1420	JL
Selenium	---	---	<0.22	U	<0.22	U	<0.22	U	---	---	---	---	<0.20	U	<0.22	U	<0.20	U	<0.20	U	<0.23	U
Silver	---	---	<0.10	U	<0.10	U	<0.11	U	---	---	---	---	<0.1	U	<0.11	U	<0.1	U	<0.09	U	<0.11	U
Sodium	---	---	246	J	228	JL	210	JL	---	---	---	---	236	JL	216	JL	105	JL	104	JL	270	JL
Thallium	---	---	<0.29	U	<0.29	UL	<0.30	UL	---	---	---	---	<0.27	UL	<0.29	UL	<0.27	UL	<0.26	U	<0.30	U
Vanadium	---	---	27.9	---	16.1	JL	11.5	JL	---	---	---	---	38.3	JL	24.0	JL	39.8	JL	34.3	JL	7.2	JL
Zinc	---	---	21.8	---	18.0	JB	14.6	JB	---	---	---	---	8.1	J	18.4	J	23.5	J	19.8	J	12.3	J

VQ - Validation Qualifier

ATTACHMENT C

Laboratory Reported Results



Report of Analysis

Page 1 of 1

Client Sample ID: 304-P2
Lab Sample ID: F4951-1
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/23/99
Date Received: 09/25/99
Percent Solids: n/a

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	1.3	0.0050	mg/l	1	09/29/99	09/29/99 SJL	SW846 6010A

RDL = Reported Detection Limit

00005



Report of Analysis

Page 1 of 1

Client Sample ID: 404-P4
Lab Sample ID: F4951-2
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/23/99
Date Received: 09/25/99
Percent Solids: n/a

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	1.0	0.0050	mg/l	1	09/29/99	09/29/99 SJL	SW846 6010A

RDL = Reported Detection Limit

000000



Report of Analysis

Page 1 of 1

Client Sample ID: 404-P3	Date Sampled: 09/23/99
Lab Sample ID: F4951-3	Date Received: 09/25/99
Matrix: SO - Soil	Percent Solids: n/a
Project: Bainbridge	

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	46.6	0.0050	mg/l	1	09/29/99	09/29/99 SJL	SW846 6010A

RDL = Reported Detection Limit

00007



Report of Analysis

Page 1 of 1

Client Sample ID:	404-P2	Date Sampled:	09/23/99
Lab Sample ID:	F4951-4	Date Received:	09/25/99
Matrix:	SO - Soil	Percent Solids:	n/a
Project:	Bainbridge		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	88.8	0.0050	mg/l	1	09/29/99	09/29/99 SJL	SW846 6010A

RDL = Reported Detection Limit

00008



Report of Analysis

Page 1 of 1

Client Sample ID:	404-P1	Date Sampled:	09/23/99
Lab Sample ID:	F4951-5	Date Received:	09/25/99
Matrix:	SO - Soil	Percent Solids:	n/a
Project:	Bainbridge		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	200	0.025	mg/l	5	09/29/99	09/29/99 SJL	SW846 6010A

RDL = Reported Detection Limit

000099



Report of Analysis

Page 1 of 1

Client Sample ID: 404-P6
Lab Sample ID: F4951-6
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/24/99
Date Received: 09/25/99
Percent Solids: n/a

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	54.3	0.0050	mg/l	1	09/29/99	09/29/99 SJL	SW846 6010A

RDL = Reported Detection Limit

00010



ACCUTEST

Report of Analysis

Page 1 of 1

Client Sample ID: 404-P5

Lab Sample ID: F4951-7

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/24/99

Date Received: 09/25/99

Percent Solids: n/a

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	1.7	0.0050	mg/l	1	09/29/99	09/29/99 SJL	SW846 6010A

RDL = Reported Detection Limit



Report of Analysis

Page 1 of 1

Client Sample ID: 707-262C

Lab Sample ID: F4951-8

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/23/99

Date Received: 09/25/99

Percent Solids: 90.0

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	37.1	10.7	mg/kg	1	09/28/99	09/28/99 EP	SW846 6010A

RDL = Reported Detection Limit

00012



Report of Analysis

Page 1 of 1

Client Sample ID: 707-276C	Date Sampled: 09/23/99
Lab Sample ID: F4951-9	Date Received: 09/25/99
Matrix: SO - Soil	Percent Solids: 89.3
Project: Bainbridge	

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	18.9	12.0	mg/kg	1	09/28/99	09/28/99 EP	SW846 6010A

RDL = Reported Detection Limit

000013



Report of Analysis

Page 1 of 1

Client Sample ID: 707-01C
Lab Sample ID: F4951-10
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/23/99
Date Received: 09/25/99
Percent Solids: 86.5

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	65.6	11.9	mg/kg	1	09/28/99	09/28/99 EP	SW846 6010A

RDL = Reported Detection Limit

00014



ACCUTEST.

Report of Analysis

Page 1 of 1

Client Sample ID: 707-46C

Lab Sample ID: F4951-11

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/23/99

Date Received: 09/25/99

Percent Solids: 85.0

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	63.1	11.9	mg/kg	1	09/28/99	09/28/99 EP	SW846 6010A

RDL = Reported Detection Limit

00015



Report of Analysis

Page 1 of 1

Client Sample ID: 707-98C

Lab Sample ID: F4951-12

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/23/99

Date Received: 09/25/99

Percent Solids: 90.1

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	41.8	11.4	mg/kg	1	09/28/99	09/28/99 EP	SW846 6010A

RDL = Reported Detection Limit

000016



Report of Analysis

Page 1 of 1

Client Sample ID: 707-155C
Lab Sample ID: F4951-13
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/23/99
Date Received: 09/25/99
Percent Solids: 84.6

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	19.1	11.8	mg/kg	1	09/28/99	09/28/99 EP	SW846 6010A

RDL = Reported Detection Limit

00017



Report of Analysis

Page 1 of 1

Client Sample ID: 304-37C
Lab Sample ID: F4951-14
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/23/99
Date Received: 09/25/99
Percent Solids: 94.8

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	7.8 B	10.5	mg/kg	1	09/28/99	09/28/99 EP	SW846 6010A

RDL = Reported Detection Limit

100018



Report of Analysis

Page 1 of 1

Client Sample ID: 304-34C
Lab Sample ID: F4951-15
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/23/99
Date Received: 09/25/99
Percent Solids: 90.8

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	9.2 B	11.4	mg/kg	1	09/28/99	09/28/99 EP	SW846 6010A

RDL = Reported Detection Limit

00019



Report of Analysis

Page 1 of 1

Client Sample ID: 304-09C
Lab Sample ID: F4951-16
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/23/99
Date Received: 09/25/99
Percent Solids: 91.9

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	10.3 B	11.3	mg/kg	1	09/28/99	09/28/99 EP	SW846 6010A

RDL = Reported Detection Limit

100020



Report of Analysis

Page 1 of 1

Client Sample ID:	304-14C	Date Sampled:	09/23/99
Lab Sample ID:	F4951-17	Date Received:	09/25/99
Matrix:	SO - Soil	Percent Solids:	90.1
Project:	Bainbridge		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	8.2 B	11.4	mg/kg	1	09/28/99	09/28/99 EP	SW846 6010A

RDL = Reported Detection Limit

00021



Report of Analysis

Page 1 of 1

Client Sample ID: 304-119C

Lab Sample ID: F4951-18

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/23/99

Date Received: 09/25/99

Percent Solids: 93.6

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	4.7 B	10.9	mg/kg	1	09/28/99	09/28/99 EP	SW846 6010A

RDL = Reported Detection Limit

100022



Report of Analysis

Page 1 of 1

Client Sample ID:	404-P11	Date Sampled:	09/24/99
Lab Sample ID:	F4951-19	Date Received:	09/25/99
Matrix:	SO - Soil	Percent Solids:	n/a
Project:	Bainbridge		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	33.7	0.0050	mg/l	1	09/29/99	09/29/99 SJL	SW846 6010A

RDL = Reported Detection Limit

100023



Report of Analysis

Page 1 of 1

Client Sample ID: 404-P9	Date Sampled: 09/24/99
Lab Sample ID: F4951-20	Date Received: 09/25/99
Matrix: SO - Soil	Percent Solids: n/a
Project: Bainbridge	

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	24.2	0.0050	mg/l	1	09/29/99	09/29/99 SJL	SW846 6010A

RDL = Reported Detection Limit

00024



Report of Analysis

Page 1 of 1

Client Sample ID: 404-P8
Lab Sample ID: F4951-21
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/24/99
Date Received: 09/25/99
Percent Solids: n/a

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	0.38	0.0050	mg/l	1	09/29/99	09/29/99 SJL	SW846 6010A

RDL = Reported Detection Limit

40025



Report of Analysis

Page 1 of 1

Client Sample ID: 707-276C

Lab Sample ID: F4951-9R

Matrix: SO - Soil

Date Sampled: 09/23/99

Date Received: 09/30/99

Percent Solids: 89.3

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	19500	21.3	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Antimony	0.68 B	6.4	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Arsenic	3.0	1.1	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Barium	42.1	21.3	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Beryllium	0.79	0.53	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Cadmium	0.04 U	0.43	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Calcium	321 B	533	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Chromium	20.6	1.1	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Cobalt	5.3	5.3	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Copper	6.9	2.7	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Iron	16800	10.7	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Lead	28.1	10.7	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Magnesium	1310	533	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Manganese	64.8	1.6	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Mercury	0.01 B	0.19	mg/kg	1	10/05/99	10/05/99 SJL	SW846 7471A
Nickel	8.5	4.3	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Potassium	734	533	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Selenium	0.22 U	10.7	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Silver	0.10 U	1.1	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Sodium	246 B	533	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Thallium	0.29 U	1.1	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Vanadium	27.9	5.3	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A
Zinc	21.8	2.1	mg/kg	1	10/05/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

100026



Report of Analysis

Page 1 of 1

Client Sample ID: 707-01C
Lab Sample ID: F4951-10R
Matrix: SO - Soil

Date Sampled: 09/23/99
Date Received: 09/30/99
Percent Solids: 86.5

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	15400	21.6	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Antimony	4.1 B	6.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Arsenic	3.0	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Barium	40.2	21.6	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Beryllium	0.77	0.54	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cadmium	0.04 U	0.43	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Calcium	236 B	540	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Chromium	7.8	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cobalt	3.4 B	5.4	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Copper	4.5	2.7	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Iron	13000	10.8	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Lead	67.6	10.8	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Magnesium	1110	540	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Manganese	56.9	1.6	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Mercury	0.01 B	0.16	mg/kg	1	10/05/99	10/05/99 SJL	SW846 7471A
Nickel	4.5	4.3	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Potassium	1070	540	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Selenium	0.22 U	10.8	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Silver	0.10 U	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Sodium	228 B	540	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Thallium	0.29 U	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Vanadium	16.1	5.4	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Zinc	18.0	2.2	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

100027



Report of Analysis

Page 1 of 1

Client Sample ID: 707-46C
Lab Sample ID: F4951-11R
Matrix: SO - Soil

Date Sampled: 09/23/99

Date Received: 09/30/99

Percent Solids: 85.0

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	13700	22.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Antimony	0.36 B	6.6	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Arsenic	2.3	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Barium	39.8	22.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Beryllium	0.83	0.55	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cadmium	0.04 U	0.44	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Calcium	261 B	550	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Chromium	5.4	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cobalt	3.9 B	5.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Copper	2.8	2.7	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Iron	10600	11.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Lead	68.0	11.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Magnesium	820	550	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Manganese	44.1	1.6	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Mercury	0.02 B	0.20	mg/kg	1	10/05/99	10/05/99 SH	SW846 7471A
Nickel	4.1 B	4.4	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Potassium	633	550	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Selenium	0.22 U	11.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Silver	0.11 U	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Sodium	210 B	550	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Thallium	0.30 U	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Vanadium	11.5	5.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Zinc	14.6	2.2	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

100028



Report of Analysis

Page 1 of 1

Client Sample ID: 304-37C
Lab Sample ID: F4951-14R
Matrix: SO - Soil

Date Sampled: 09/23/99
Date Received: 09/30/99
Percent Solids: 94.8

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	14100	19.9	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Antimony	1.3 B	6.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Arsenic	3.9	1.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Barium	30.9	19.9	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Beryllium	0.55	0.50	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cadmium	0.03 U	0.40	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Calcium	870	498	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Chromium	24.1	1.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cobalt	3.7 B	5.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Copper	5.3	2.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Iron	22400	10	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Lead	10.8	10	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Magnesium	783	498	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Manganese	70.2	1.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Mercury	0.05 B	0.17	mg/kg	1	10/05/99	10/05/99 SJL	SW846 7471A
Nickel	7.1	4.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Potassium	449 B	498	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Selenium	0.20 U	10	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Silver	0.1 U	1.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Sodium	236 B	498	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Thallium	0.27 U	1.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Vanadium	38.3	5.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Zinc	8.1	2.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

00029



Report of Analysis

Page 1 of 1

Client Sample ID: 304-34C
Lab Sample ID: F4951-15R
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/23/99
Date Received: 09/30/99
Percent Solids: 90.8

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	13400	21.8	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Antimony	0.78 B	6.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Arsenic	2.3	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Barium	44.6	21.8	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Beryllium	0.74	0.55	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cadmium	0.04 U	0.44	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Calcium	1410	545	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Chromium	15.0	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cobalt	6.7	5.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Copper	6.3	2.7	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Iron	15400	10.9	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Lead	10.2 B	10.9	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Magnesium	1510	545	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Manganese	115	1.6	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Mercury	0.01 B	0.19	mg/kg	1	10/05/99	10/05/99 SJH	SW846 7471A
Nickel	7.8	4.4	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Potassium	668	545	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Selenium	0.22 U	10.9	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Silver	0.11 U	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Sodium	216 B	545	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Thallium	0.29 U	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Vanadium	24.0	5.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Zinc	18.4	2.2	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

100030



Report of Analysis

Page 1 of 1

Client Sample ID: 304-09C
Lab Sample ID: F4951-16R
Matrix: SO - Soil

Date Sampled: 09/23/99

Date Received: 09/30/99

Percent Solids: 91.9

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	18500	20.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Antimony	0.86 B	6.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Arsenic	4.5	1.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Barium	38.0	20.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Beryllium	0.81	0.50	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cadmium	0.03 U	0.40	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Calcium	387 B	499	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Chromium	20.0	1.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cobalt	6.5	5.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Copper	11.2	2.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Iron	22800	10	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Lead	12.2	10	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Magnesium	2140	499	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Manganese	140	1.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Mercury	0.01 B	0.16	mg/kg	1	10/05/99	10/05/99 SH	SW846 7471A
Nickel	10.2	4.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Potassium	973	499	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Selenium	0.20 U	10	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Silver	0.1 U	1.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Sodium	105 B	499	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Thallium	0.27 U	1.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Vanadium	39.8	5.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Zinc	23.5	2.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

100031



Report of Analysis

Page 1 of 1

Client Sample ID: 304-14C
Lab Sample ID: F4951-17R
Matrix: SO - Soil

Date Sampled: 09/23/99
Date Received: 09/30/99
Percent Solids: 90.1

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	15600	19.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Antimony	0.85 B	5.7	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Arsenic	4.1	0.96	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Barium	35.3	19.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Beryllium	0.88	0.48	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cadmium	0.03 U	0.38	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Calcium	448 B	478	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Chromium	16.6	0.96	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cobalt	9.5	4.8	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Copper	10.1	2.4	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Iron	21000	9.6	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Lead	8.9 B	9.6	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Magnesium	1750	478	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Manganese	261	1.4	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Mercury	0.02 B	0.19	mg/kg	1	10/05/99	10/05/99 SJL	SW846 7471A
Nickel	8.7	3.8	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Potassium	988	478	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Selenium	0.20 U	9.6	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Silver	0.09 U	0.96	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Sodium	104 B	478	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Thallium	0.26 U	0.96	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Vanadium	34.3	4.8	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Zinc	19.8	1.9	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

100032



Report of Analysis

Page 1 of 1

Client Sample ID: 304-119C

Lab Sample ID: F4951-18R

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/23/99

Date Received: 09/30/99

Percent Solids: 93.6

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	18200	22.3	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Antimony	0.48 B	6.7	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Arsenic	0.52 B	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Barium	33.1	22.3	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Beryllium	0.75	0.56	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cadmium	0.04 U	0.45	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Calcium	575	556	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Chromium	3.8	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cobalt	1.7 B	5.6	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Copper	5.8	2.8	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Iron	9000	11.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Lead	5.5 B	11.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Magnesium	1210	556	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Manganese	29.3	1.7	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Mercury	0.01 U	0.18	mg/kg	1	10/05/99	10/05/99 STL	SW846 7471A
Nickel	2.2 B	4.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Potassium	1420	556	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Selenium	0.23 U	11.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Silver	0.11 U	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Sodium	270 B	556	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Thallium	0.30 U	1.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Vanadium	7.2	5.6	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Zinc	12.3	2.2	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

100033

ATTACHMENT D

Laboratory Reported Tentatively Identified Compounds

(Not Applicable)

ATTACHMENT E

Support Documentation



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. _____
Page 1 of 2

Project Name/No. Bainbridge 798939 Samples Shipment Date 9/24/99 Bill to: IT corp
Sample Team Members 2 Treater/Klinger Lab Destination 8 Accutest Lab 2790 Moss Side Blvd
Profit Center No. 3 Lab Contact 9 Susan Gaudios Monroeville, PA 15146
Project Manager 4 L. Stearns Project Contact/Phone 12 Dick Treater Report to: 10 Larry Stearns
Purchase Order No. 6 798939-007 Carrier/Waybill No. 13 FedEx 791795291850 IT Corp
Required Report Date 11 3 days 2790 Moss Side Blvd
Monroeville, PA 15146

ONE CONTAINER PER LINE

Sample Number ¹⁴	Sample Description/Type ¹⁵	Date/Time Collected ¹⁶	Container Type ¹⁷	Sample Volume ¹⁸	Pre-servative ¹⁹	Requested Testing Program ²⁰	Condition on Receipt ²¹	Disposal Record No. ²²
304-P2	Comp Spt Soil Bldg 304 Pile 2	9/23/99 1500	1-303	803	4°C	TCLP Lead 1311/6010		
404-P4	Comp Spt Soil Bldg 404 Pile 4	9/23/99 1515						MS/MSD
404-P3	Comp Spt Soil Bldg 404 Pile 3	9/23/99 1530						
404-P2	Comp Spt Soil Bldg 404 Pile 2	9/23/99 1700						
404-P1	Comp Spt Soil Bldg 404 Pile 1	9/23/99 1830						
404-P2	Comp Spt Soil Bldg 404 Pile 2	9/23/99 1845				DT 9/24/99		
404-P6	Comp Spt Soil Bldg 404 Pile 6	9/24/99 1030						
404-P5	Comp Spt Soil Bldg 404 Pile 5	9/24/99 1215						

Special Instructions: 23 E-mail results to Dorothy Small

Possible Hazard Identification: 24 Lead

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: 25

Return to Client ☐ Disposal by Lab ☒ Archive (mos.)

Turnaround Time Required: 26

Normal ☐ Rush ☒ 3 days

QC Level: 27

I. ☐ II. ☐ III. ☒ Project Specific (specify): Navy MFESC Level C

1. Relinquished by 28 Dick Treater Date: 9/24/99
(Signature/Affiliation) Dick Treater/IT Time: 1730

1. Received by 28 Radiol Air Date: 9/25/99
(Signature/Affiliation) CO/16142 Time: 1000

2. Relinquished by _____ Date: _____
(Signature/Affiliation) Time: _____

2. Received by _____ Date: _____
(Signature/Affiliation) Time: _____

3. Relinquished by _____ Date: _____
(Signature/Affiliation) Time: _____

3. Received by _____ Date: _____
(Signature/Affiliation) Time: _____

Comments: 29

Fax results to Dick Treater
410-372-3232



Reference Document No.³⁰ 559860
Page 2 of 2

Samples Shipment Date 9/24/99

[illegible]

*See back of form for special instructions

Accutest Laboratories Southeast
Case Narrative

Job (SDG) No.: F4951

Samples: 1 21

Analysis Performed: HHAIS

1) Sample Receipt Conformance / Non-Conformance Summary

Custody Seals on Coolers?	Yes <input checked="" type="checkbox"/> ()	No ()
Custody Seals in Tact?	Yes <input checked="" type="checkbox"/> ()	No ()
Chain of Custody Sealed in Plastic?	Yes <input checked="" type="checkbox"/> ()	No ()
Chain of Custody Filled out Properly?	Yes <input checked="" type="checkbox"/> ()	No ()
Enough ice and Packing material?	Yes <input checked="" type="checkbox"/> ()	No ()
All Bottles Sealed?	Yes <input checked="" type="checkbox"/> ()	No ()
Any Bottles Broken?	Yes ()	No <input checked="" type="checkbox"/> ()
Labels in good condition?	Yes <input checked="" type="checkbox"/> ()	No ()
Labels agree with chain of custody?	Yes <input checked="" type="checkbox"/> ()	No ()
Correct Containers Used?	Yes <input checked="" type="checkbox"/> ()	No ()
Preserved Properly?	Yes <input checked="" type="checkbox"/> ()	No ()
Sufficient Sample?	Yes <input checked="" type="checkbox"/> ()	No ()

Comments: _____

000037

Job # F4951

Accutest Laboratories Southeast
Case Narrative

3) **Metals Conformance / Non-conformance Summary**

Blank level below reporting limits? **MP215B** Yes (✓) No ()

If no, list analytes above reporting limits: _____

Spike blank (LCS) data within acceptable Limits? **MP215B** Yes (✓) No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

Matrix spike data within acceptable limits? **MP215B** Yes (✓) No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

Matrix duplicate data within acceptable limits? **MP215B** Yes (✓) No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

Samples prepared and analyzed within holding time? Yes (✓) No ()

If holding times were not met, list analytes where holding times were exceeded and explain: _____

All analytical criteria met (calibration, CCV, ICV, CCB, etc.)? Yes (✓) No ()

If not met, list effected samples and analytes: _____

Comments: _____

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F4951
Account: ITPAMONR - IT Corporation
Project: ITPAMONR159/ - Bainbridge

File ID: IR1007M1.ASC
QC Limits: 70 to 130 % Recovery

Date Analyzed: 10/07/99
Run ID: MA1578

Methods: SW846 6010A
Units: ug/l

Metal	CRI True	CRIA True	CRIA Results	% Rec	CRI Results	% Rec
Aluminum	200					
Antimony		10	7.4B	74.0		
Arsenic		10	10.0	100.0		
Barium	200				206	103.1
Beryllium	5.0				5.7	114.8
Cadmium	5.0				5.3	106.8
Calcium	1000					
Chromium	10				10.6	106.2
Cobalt	50				50.7	101.4
Copper	25				24.2B	97.0
Iron	300					
Lead		10	7.6B	76.0		
Magnesium	5000					
Manganese	15				15.4	102.3
Molybdenum	50					
Nickel	40				42.6	106.6
Potassium	5000					
Selenium		10	10.9B	109.3		
Silver	10				10.3	103.2
Sodium	5000					
Thallium		10	12.0	119.9		
Tin	50					
Vanadium	50				49.9B	99.8
Zinc	20				23.5	117.4

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4951
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR0929M1.ASC
QC Limits: result < RDL

Date Analyzed: 09/29/99
Run ID: MA1567

Methods: EPA 200.7, SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr					
Antimony	5.0	2.39	anr					
Arsenic	10	3.4	anr					
Barium	200	.39	anr					
Beryllium	5.0	.36	anr					
Cadmium	5.0	.33	anr					
Calcium	1000	19.5	anr					
Chromium	10	.637	anr					
Cobalt	50	.797	anr					
Copper	25	.747	anr					
Iron	300	32	anr					
Lead	5.0	1.59	0.80	<5.0	7.1	* (a)	2.8	<5.0B
magnesium	5000	17.6	anr					
Manganese	15	.16	anr					
Molybdenum	50	.68	anr					
Nickel	40	1	anr					
Potassium	5000	28.2	anr					
Selenium	10	2	anr					
Silver	10	.96	anr					
Sodium	5000	153	anr					
Thallium	10	2.69	anr					
Tin	50	2.2	anr					
Vanadium	50	.717	anr					
Zinc	20	.83	anr					

(*) Outside of QC limits
(anr) Analyte not requested
(a) Soil RDL for Pb at .10 ppm.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4951
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR0928M1.ASC
QC Limits: result < RDL

Date Analyzed: 09/28/99
Run ID: MA1566

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	60	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	4.0	.33	anr							
Calcium	5000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	100	32	anr							
Lead	100	1.59	0.60	<100	2.2	<100B	1.2	<100	1.5	<100
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	100	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4951
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR0928M1.ASC
QC Limits: result < RDL

Date Analyzed: 09/28/99
Run ID: MA1566

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	60	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	4.0	.33	anr							
Calcium	5000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	100	32	anr							
Lead	100	1.59	1.2	<100	0.73	<100	1.7	<100	1.7	<100B
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	100	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4951
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR0928M1.ASC
QC Limits: result < RDL

Date Analyzed: 09/28/99
Run ID: MA1566

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr					
Antimony	60	2.39	anr					
Arsenic	10	3.4	anr					
Barium	200	.39	anr					
Beryllium	5.0	.36	anr					
Cadmium	4.0	.33	anr					
Calcium	5000	19.5	anr					
Chromium	10	.637	anr					
Cobalt	50	.797	anr					
Copper	25	.747	anr					
Iron	100	32	anr					
Lead	100	1.59	1.3	<100	2.2	<100B	2.3	<100
Magnesium	5000	17.6	anr					
Manganese	15	.16	anr					
Molybdenum	50	.68	anr					
Nickel	40	1	anr					
Potassium	5000	28.2	anr					
Selenium	100	2	anr					
Silver	10	.96	anr					
Sodium	5000	153	anr					
Thallium	10	2.69	anr					
Tin	50	2.2	anr					
Vanadium	50	.717	anr					
Zinc	20	.83	anr					

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F4951
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2101
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 09/28/99

Metal	RDL	IDL	MB raw	final
Aluminum	20	3	anr	
Antimony	6.0	.239	anr	
Arsenic	1.0	.345	anr	
Barium	20	.039	anr	
Beryllium	0.50	.0363	anr	
Cadmium	0.40	.033	anr	
Calcium	500	1.95	anr	
Chromium	1.0	.0637	anr	
Cobalt	5.0	.0797	anr	
Copper	2.5	.0747	anr	
Iron	10	3.2	anr	
Lead	10	.159	0.96	<10
Magnesium	500	1.76	anr	
Manganese	1.5	.016	anr	
Molybdenum	5.0	.068	anr	
Nickel	4.0	.1	anr	
Potassium	500	2.82	anr	
Selenium	10	.204	anr	
Silver	1.0	.0963	anr	
Sodium	500	15.3	anr	
Thallium	1.0	.269	anr	
Tin	5.0	.223	anr	
Vanadium	5.0	.0717	anr	
Zinc	2.0	.083	anr	

Associated samples MP2101: F4951-8, F4951-9, F4951-10, F4951-11, F4951-12, F4951-13, F4951-14

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

000099

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F4951
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2100
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 09/28/99

Metal	RDL	IDL	MB raw	final
Aluminum	20.0	3	anr	
Antimony	6.0	.24	anr	
Arsenic	1.0	.34	anr	
Barium	20.0	.04	anr	
Beryllium	0.50	.04	anr	
Cadmium	0.40	.03	anr	
Calcium	500	2	anr	
Chromium	1.0	.06	anr	
Cobalt	5.0	.08	anr	
Copper	2.5	.07	anr	
Iron	10.0	3.2	anr	
Lead	10.0	.16	0.34	<10.0
Magnesium	500	1.8	anr	
Manganese	1.5	.02	anr	
Molybdenum	5.0	.07	anr	
Nickel	4.0	.1	anr	
Potassium	500	2.8	anr	
Selenium	10.0	.2	anr	
Silver	1.0	.1	anr	
Sodium	500	15.3	anr	
Thallium	1.0	.27	anr	
Tin	5.0	.22	anr	
Vanadium	5.0	.07	anr	
Zinc	2.0	.08	anr	

Associated samples MP2100: F4951-15, F4951-16, F4951-17, F4951-18

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

000100

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4951
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2100
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date:

09/28/99

09/28/99

Metal	F4938-1 Original DHP	RPD	QC Limits	F4938-1 Original MS	SpikeLot MPFLICP	% Rec	QC Limits
Aluminum	anr						
Antimony	anr						
Arsenic	anr						
Barium	anr						
Beryllium	anr						
Cadmium	anr						
Calcium	anr						
Chromium	anr						
Cobalt	anr						
Copper	anr						
Iron	anr						
Lead	527	672	23.4	0-44	527	581	111.16 48.8 (a) 60-127
Magnesium	anr						
Manganese	anr						
Molybdenum	anr						
Nickel	anr						
Potassium	anr						
Selenium	anr						
Silver	anr						
Sodium	anr						
Thallium	anr						
Tin	anr						
Vanadium	anr						
Zinc	anr						

Associated samples MP2100: F4951-15, F4951-16, F4951-17, F4951-18

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4951
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2100
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date: 09/28/99

Metal	F4938-1 Original MSD	Spikelot MPFLICP	& Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	527	560	112.3	25.7 (a) 60-127
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Thallium	anr			
Tin				
Vanadium	anr			
Zinc	anr			

Associated samples MP2100: F4951-15, F4951-16, F4951-17, F4951-18

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4951
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2101
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date:

09/28/99

09/28/99

Metal	F4952-1A Original DUP	RPD	QC Limits	F4952-1A Original MS	Spikelot MPFLICP	Rec	QC Limits
Aluminum	anr						
Antimony	anr						
Arsenic	anr						
Barium	anr						
Beryllium	anr						
Cadmium	anr						
Calcium	anr						
Chromium	anr						
Cobalt	anr						
Copper	anr						
Iron	anr						
Lead	9.7	9.1	36.0	0-44	9.7	13.4	117
Magnesium	anr						3.2N
Manganese	anr						60-127
Molybdenum	anr						
Nickel	anr						
Potassium	anr						
Selenium	anr						
Silver	anr						
Sodium	anr						
Thallium	anr						
Tin	anr						
Vanadium	anr						
Zinc	anr						

Associated samples MP2101: F4951-8, F4951-9, F4951-10, F4951-11, F4951-12, F4951-13, F4951-14

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4951
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2126
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date: 10/07/99

10/07/99

Metal	F4951-10R Original DUP		RPD	QC Limits	F4951-10R Original MS		Spikelot MPFLICP	% Rec	QC Limits
Aluminum	15400	16700	8.3	0-20	15400	23500	3286.86	247.3(a)	80-120
Antimony	4.1	4.8	16.6	0-20	4.1	68.2	113.34	56.6N	80-120
Arsenic	3.0	3.1	4.8	0-28	3.0	315	453.36	68.8N	72-110
Barium	40.2	43.9	8.7	0-14	40.2	388	453.36	76.8	64-116
Beryllium	0.77	0.86	11.3	0-20	0.77	9.5	11.33	76.7N	80-120
Cadmium	0.0	0.0	NC	0-16	0.0	8.3	11.33	73.0	64-120
Calcium	236	258	8.6	0-20	236	2290	2833.5	72.3N	80-120
Chromium	7.8	8.6	8.8	0-33	7.8	42.1	45.34	75.5	66-119
Cobalt	3.4	3.7	9.3	0-20	3.4	86.3	113.34	73.2N	80-120
Copper	4.5	4.9	9.5	0-39	4.5	47.8	56.67	76.5	65-124
Iron	13000	14100	8.5	0-20	13000	16400	3060.18	111.9	80-120
Lead	67.6	74.1	9.1	0-44	67.6	213	113.34	128.2N	60-127
Magnesium	1110	1220	8.8	0-20	1110	3300	2833.5	77.1N	80-120
Manganese	56.9	62.0	8.7	0-20	56.9	142	113.34	75.3N	80-120
Molybdenum	anr								
Nickel	4.5	5.0	10.3	0-30	4.5	90.2	113.34	75.6	71-119
Potassium	1070	1160	8.1	0-20	1070	3060	2833.5	70.3N	80-120
Selenium	0.0	0.0	NC	0-28	0.0	331	453.36	73.1	65-115
Silver	0	0	NC	0-21	0	7.4	11.33	65.1	63-123
Sodium	228	248	8.3	0-20	228	2200	2833.5	69.8N	80-120
Thallium	0.00	0.00	NC	0-20	0.00	338	453.36	74.8N	80-120
Tin	anr								
Vanadium	16.1	17.6	8.9	0-20	16.1	100	113.34	74.4N	80-120
Zinc	18.0	19.8	9.5	0-31	18.0	102	113.34	74.5	69-120

Associated samples MP2126: F4951-10R, F4951-11R, F4951-14R, F4951-15R, F4951-16R, F4951-17R, F4951-18R

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SERIAL DILUTION RESULTS SUMMARY

Login Number: F4951
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2126
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: ug/l

Prep Date: 10/07/99

Metal	F4951-10R Original	SDL 1.5	RPD	QC Limits
Aluminum	142000	172000	20.8	0-10
Antimony	37.6	46.2	22.8 (a)	0-10
Arsenic	27.3	34.0	24.3 (a)	0-10
Barium	372	449	20.7	0-10
Beryllium	7.13	14.5	103.6(a)	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	2190	2030	22.5	0-10
Chromium	72.5	91.0	25.5	0-10
Cobalt	31.0	37.4	20.6 (a)	0-10
Copper	41.3	38.8	6.0	0-10
Iron	120000	143000	19.3	0-10
Lead	626	818	30.8	0-10
Magnesium	10300	12500	21.3	0-10
Manganese	526	633	20.3	0-10
Molybdenum	anr			
Nickel	41.7	56.3	35.2 (a)	0-10
Potassium	9930	12800	28.5	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	2110	1380	34.7 (a)	0-10
Thallium	0.00	0.00	NC	0-10
Tin	anr			
Vanadium	149	178	19.1	0-10
Zinc	167	401	140.9	0-10

Associated samples MP2126: F4951-10R, F4951-11R, F4951-14R, F4951-15R, F4951-16R, F4951-17R, F4951-18R

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

SERIAL DILUTION RESULTS SUMMARY

Login Number: F4951
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2101
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: ug/l

Prep Date: 09/28/99

Metal	F4952-1A Original	SDL 1.5	RPD	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	82.4	1020	822.5*	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Thallium	anr			
Tin	anr			
Vanadium	anr			
Zinc	anr			

Associated samples MP2101: F4951-8, F4951-9, F4951-10, F4951-11, F4951-12, F4951-13, F4951-14

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4951
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1007M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/07/99
Run ID: MA1578

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	18.0	<200	32.6	<200B	66.9	<200B		
Antimony	60	2.39	5.1	<60.0B	3.6	<60.0B	6.9	<60.0B		
Arsenic	10	3.4	-1.3	<10.0	-0.30	<10.0	3.5	<10.0B		
Barium	200	.39	0.90	<200B	1.0	<200B	0.80	<200B		
Beryllium	5.0	.36	1.3	<5.0B	1.4	<5.0B	1.6	<5.0B		
Cadmium	4.0	.33	0.90	<4.0B	1.1	<4.0B	0.90	<4.0B		
Calcium	5000	19.5	15.5	<5000	18.3	<5000	59.9	<5000B		
Chromium	10	.637	0.80	<10.0B	1.2	<10.0B	1.0	<10.0B		
Cobalt	50	.797	0.90	<50.0B	0.90	<50.0B	0.80	<50.0B		
Copper	25	.747	-0.30	<25.0	-0.20	<25.0	-0.70	<25.0		
Iron	100	32	14.3	<100	21.1	<100	36.0	<100B		
Lead	100	1.59	0.20	<100	1.8	<100B	1.4	<100		
Magnesium	5000	17.6	16.5	<5000	19.0	<5000B	61.6	<5000B		
Manganese	15	.16	0.80	<15.0B	1.0	<15.0B	0.80	<15.0B		
Molybdenum	50	.68	anr							
Nickel	40	1	0.80	<40.0	0.30	<40.0	0.80	<40.0		
Potassium	5000	28.2	1.9	<5000	30.9	<5000B	16.3	<5000		
Selenium	100	2	1.1	<100	0.20	<100	0.70	<100		
Silver	10	.96	1.0	<10.0B	0.50	<10.0	1.4	<10.0B		
Sodium	5000	153	-35.8	<5000	-105	<5000	-78.3	<5000		
Thallium	10	2.69	7.1	<10.0B	4.4	<10.0B	4.7	<10.0B		
Tin	50	2.2	anr							
Vanadium	50	.717	1.6	<50.0B	1.2	<50.0B	1.1	<50.0B		
Zinc	20	.83	0.50	<20.0	1.1	<20.0B	0.40	<20.0		

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4951
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1007M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/07/99
Run ID: MA1578

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	13.1	<200	56.7	<200B	66.6	<200B	52.6	<200B
Antimony	60	2.39	4.7	<200	4.4	<60.0B	5.2	<60.0B	3.7	<60.0B
Arsenic	10	3.4	0.10	<500	1.3	<10.0	0.60	<10.0	-0.70	<10.0
Barium	200	.39	0.040	<1000	1.3	<200B	1.2	<200B	1.1	<200B
Beryllium	5.0	.36	1.1	<5.0	2.2	<5.0B	2.3	<5.0B	2.4	<5.0B
Cadmium	4.0	.33	0.0	<50	0.80	<4.0B	0.80	<4.0B	1.1	<4.0B
Calcium	5000	19.5	-1.7	<5000	15.8	<5000	18.2	<5000	24.7	<5000B
Chromium	10	.637	0.050	<50	1.4	<10.0B	1.3	<10.0B	1.2	<10.0B
Cobalt	50	.797	0.0	<50	1.0	<50.0B	0.80	<50.0B	0.70	<50.0
Copper	25	.747	-2.3	<25	-1.7	<25.0B	-1.7	<25.0B	-2.4	<25.0B
Iron	100	32	0.89	<100	32.2	<100B	61.8	<100B	41.2	<100B
Lead	100	1.59	9.8	<500	13.0	<100B	5.3	<100B	6.7	<100B
Magnesium	5000	17.6	0.89	<5000	19.4	<5000B	24.2	<5000B	21.3	<5000B
Manganese	15	.16	0.13	<15	1.2	<15.0B	1.9	<15.0B	1.8	<15.0B
Molybdenum	50	.68	anr							
Nickel	40	1	-0.43	<40	0.90	<40.0	2.5	<40.0B	2.4	<40.0B
Potassium	5000	28.2	-11	<5000	10.0	<5000	18.5	<5000	8.3	<5000
Selenium	100	2	1.0	<500	2.4	<100B	0.60	<100	1.2	<100
Silver	10	.96	0.98	<50	2.1	<10.0B	1.0	<10.0B	0.40	<10.0
Sodium	5000	153	-250	<5000	-154	<5000B	-0.50	<5000	-100	<5000
Thallium	10	2.69	3.2	<500	7.2	<10.0B	7.8	<10.0B	4.7	<10.0B
Tin	50	2.2	anr							
Vanadium	50	.717	0.37	<50	1.6	<50.0B	1.8	<50.0B	1.6	<50.0B
Zinc	20	.83	-0.75	<20	0.30	<20.0	0.20	<20.0	0.40	<20.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4951
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1007M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/07/99
Run ID: MA1578

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	43.6	<200B	44.5	<200	36.1	<200
Antimony	60	2.39	6.2	<60.0B	5.5	<200	2.8	<200
Arsenic	10	3.4	0.80	<10.0	0.98	<500	-0.80	<500
Barium	200	.39	1.4	<200B	0.72	<1000	0.38	<1000
Beryllium	5.0	.36	2.3	<5.0B	2.0	<5.0	1.7	<5.0
Cadmium	4.0	.33	1.0	<4.0B	0.57	<50	0.36	<50
Calcium	5000	19.5	60.6	<5000B	14.7	<5000	6.3	<5000
Chromium	10	.637	1.6	<10.0B	0.91	<50	0.43	<50
Cobalt	50	.797	1.2	<50.0B	0.60	<50	0.20	<50
Copper	25	.747	-1.2	<25.0B	-2.0	<25	-2.1	<25
Iron	100	32	30.4	<100	12.5	<100	-0.10	<100
Lead	100	1.59	6.8	<100B	14.6	<500	18.8	<500
Magnesium	5000	17.6	24.1	<5000B	14.4	<5000	7.3	<5000
Manganese	15	.16	1.5	<15.0B	0.79	<15	0.44	<15
Molybdenum	50	.68	anr					
Nickel	40	1	2.1	<40.0B	-0.090	<40	-0.020	<40
Potassium	5000	28.2	85.1	<5000B	51.0	<5000	38.1	<5000
Selenium	100	2	1.8	<100	-0.52	<500	-0.21	<500
Silver	10	.96	1.7	<10.0B	1.8	<50	1.5	<50
Sodium	5000	153	105	<5000	221	<5000	68.7	<5000
Thallium	10	2.69	8.7	<10.0B	7.4	<500	4.2	<500
Tin	50	2.2	anr					
Vanadium	50	.717	1.6	<50.0B	1.1	<50	0.49	<50
Zinc	20	.83	0.50	<20.0	0.020	<20	-0.35	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F4951
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2126
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 10/07/99

Metal	RDL	IDL	MB raw	final
Aluminum	20.0	3	3.4	<20.0
Antimony	6.0	.24	0.59	<6.0
Arsenic	1.0	.34	-0.20	<1.0
Barium	20.0	.04	0.35	<20.0
Beryllium	0.50	.04	0.1	<0.50
Cadmium	0.40	.03	0.006	<0.40
Calcium	500	2	0.92	<500
Chromium	1.0	.06	0.12	<1.0
Cobalt	5.0	.08	-0.001	<5.0
Copper	2.5	.07	-0.09	<2.5
Iron	10.0	3.2	3.6	<10.0
Lead	10.0	.16	6.9	<10.0
Magnesium	500	1.8	0.57	<500
Manganese	1.5	.02	0.06	<1.5
Molybdenum	5.0	.07	anr	
Nickel	4.0	.1	0.04	<4.0
Potassium	500	2.8	1.2	<500
Selenium	10.0	.2	-0.11	<10.0
Silver	1.0	.1	0.14	<1.0
Sodium	500	15.3	-14.6	<500
Thallium	1.0	.27	0.27	<1.0
Tin	5.0	.22	anr	
Vanadium	5.0	.07	0.05	<5.0
Zinc	4.0	.08	3.9	<4.0

Associated samples MP2126: F4951-10R, F4951-11R, F4951-14R, F4951-15R, F4951-16R, F4951-17R, F4951-18R

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F4951
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2121
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 10/05/99

Metal	RDL	IDL	MB raw	final
Aluminum	20.0	3	4.2	<20.0
Antimony	6.0	.24	0.06	<6.0
Arsenic	1.0	.34	-0.07	<1.0
Barium	20.0	.04	0.26	<20.0
Beryllium	0.50	.04	0.08	<0.50
Cadmium	0.40	.03	0.11	<0.40
Calcium	500	2	5.8	<500
Chromium	1.0	.06	0.10	<1.0
Cobalt	5.0	.08	-0.01	<5.0
Copper	2.5	.07	0.04	<2.5
Iron	10.0	3.2	2.8	<10.0
Lead	10.0	.16	1.4	<10.0
Magnesium	500	1.8	1.4	<500
Manganese	1.5	.02	0.06	<1.5
Molybdenum	5.0	.07	anr	
Nickel	4.0	.1	0.23	<4.0
Potassium	500	2.8	5.5	<500
Selenium	10.0	.2	0.24	<10.0
Silver	1.0	.1	0.14	<1.0
Sodium	500	15.3	-1.7	<500
Thallium	1.0	.27	0.21	<1.0
Tin	5.0	.22	anr	
Vanadium	5.0	.07	0.04	<5.0
Zinc	4.0	.08	3.7	<4.0

Associated samples MP2121: F4951-9R

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4951
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2121
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 10/05/99

10/05/99

Metal	F4951-9R Original DUP		RPD	QC Limits	F4951-9R Original MS		Spikelot MPFLICP	% Rec	QC Limits
Aluminum	19500	21100	7.9	0-20	19500	27600	3183.8	255.6(b)	80-120
Antimony	0.68	1.1	45.8 (a)	0-20	0.68	66.2	109.79	59.7N	80-120
Arsenic	3.0	3.3	11.8	0-28	3.0	332	439.15	74.9	72-110
Barium	42.1	45.8	8.5	0-14	42.1	410	439.15	83.7	64-116
Beryllium	0.79	0.87	9.5	0-20	0.79	10.1	10.98	84.5	80-120
Cadmium	0.0	0.06	200.0(a)	0-16	0.0	8.9	10.98	81.2	64-120
Calcium	321	474	38.6 (A)	0-20	321	2670	2744.66	85.7	80-120
Chromium	20.6	22.3	7.8	0-33	20.6	57.6	43.91	84.1	66-119
Cobalt	5.3	5.8	8.5	0-20	5.3	94.2	109.79	80.9	80-120
Copper	6.9	10.2	38.6	0-39	6.9	53.4	54.89	84.7	65-124
Iron	16800	18200	7.9	0-20	16800	20000	2964.23	106.0	80-120
Lead	28.1	30.7	8.7	0-44	28.1	118	109.79	82.0	60-127
Magnesium	1310	1430	8.4	0-20	1310	3610	2744.66	83.8	80-120
Manganese	64.8	70.2	8.1	0-20	64.8	157	109.79	84.0	80-120
Molybdenum	anr								
Nickel	8.5	9.2	8.4	0-30	8.5	99.6	109.79	83.0	71-119
Potassium	734	792	7.6	0-20	734	3270	2744.66	92.4	80-120
Selenium	0.0	0.0	NC	0-28	0.0	351	439.15	79.9	65-115
Silver	0.0	0	NC	0-21	0.0	7.9	10.98	72.0	63-123
Sodium	246	272	9.9	0-20	246	2310	2744.66	75.1N	80-120
Thallium	0.00	0.00	NC	0-20	0.00	350	439.15	79.8N	60-120
Tin	anr								
Vanadium	27.9	30.2	7.9	0-20	27.9	117	109.79	81.5	80-120
Zinc	21.8	25.0	13.3	0-31	21.8	110	109.79	80.3	69-120

Associated samples MP2121: F4951-9R

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) RPD acceptable due to low duplicate and sample concentrations.

(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4951
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2121
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date: 10/05/99

Metal	F4951-9R Original MSD	Spikelot MPFLICP	% Rec	QC Limits
Aluminum	19500	28900	3347.92	280.2(a) 80-120
Antimony	0.68	69.1	115.45	59.3N 80-120
Arsenic	3.0	345	461.78	74.1 72-110
Barium	42.1	428	461.78	83.6 64-116
Beryllium	0.79	10.5	11.54	84.0 80-120
Cadmium	0.0	9.3	11.54	80.2 64-120
Calcium	321	2780	2886.14	85.3 80-120
Chromium	20.6	59.9	46.18	85.1 66-119
Cobalt	5.3	98.0	115.45	80.3 80-120
Copper	6.9	55.9	57.72	84.8 65-124
Iron	16800	20800	3117.03	127.0(a) 80-120
Lead	28.1	123	115.45	82.1 60-127
Magnesium	1310	3750	2886.14	84.3 80-120
Manganese	64.8	164	115.45	85.6 80-120
Molybdenum				
Nickel	8.5	104	115.45	82.4 71-119
Potassium	734	3430	2886.14	93.3 80-120
Selenium	0.0	365	461.78	79.1 65-115
Silver	0.0	8.4	11.54	72.3 63-123
Sodium	246	2420	2886.14	75.2N 80-120
Thallium	0.00	365	461.78	79.0N 80-120
Tin				
Vanadium	27.9	122	115.45	81.9 80-120
Zinc	21.8	114	115.45	79.9 69-120

Associated samples MP2121: F4951-9R

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4951
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2126
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date: 10/07/99

Metal	F4951-10R Original MSD		Spikelot MPFLICP	% Rec	QC Limits
Aluminum	15400	23800	3319.41	252.8(a)	80-120
Antimony	4.1	69.5	114.46	57.1N	80-120
Arsenic	3.0	319	457.85	69.0N	72-110
Barium	40.2	394	457.85	77.2	64-116
Beryllium	0.77	9.6	11.45	77.1N	80-120
Cadmium	0.0	8.4	11.45	73.1	64-120
Calcium	236	2310	2861.56	72.5N	80-120
Chromium	7.8	42.5	45.78	75.8	66-119
Cobalt	3.4	87.4	114.46	73.4N	80-120
Copper	4.5	48.5	57.23	77.0	65-124
Iron	13000	16600	3090.48	117.2	80-120
Lead	67.6	179	114.46	97.2	60-127
Magnesium	1110	3330	2861.56	77.6N	80-120
Manganese	56.9	144	114.46	76.1N	80-120
Molybdenum					
Nickel	4.5	91.2	114.46	75.8	71-119
Potassium	1070	3120	2861.56	71.6N	80-120
Selenium	0.0	332	457.85	72.5	65-115
Silver	0	7.4	11.45	64.9	63-123
Sodium	228	2200	2861.56	68.8N	80-120
Thallium	0.00	344	457.85	75.1N	80-120
Tin					
Vanadium	16.1	102	114.46	74.8N	80-120
Zinc	18.0	103	114.46	74.6	69-120

Associated samples MP2126: F4951-10R, F4951-11R, F4951-14R, F4951-15R, F4951-16R, F4951-17R, F4951-18R

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SERIAL DILUTION RESULTS SUMMARY

Login Number: F4951
 Account: ITPAMONR IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2121
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: ug/l

Prep Date: 10/05/99

Metal	F4951-9R Original	SDL 1-5	RPD	QC Limits
Aluminum	183000	199000	9.0	0-10
Antimony	6.34	0.00	100.0 (a)	0-10
Arsenic	27.9	36.8	31.9 (a)	0-10
Barium	394	457	15.7	0-10
Beryllium	7.43	12.2	64.9 (a)	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	3010	3600	12.6	0-10
Chromium	193	212	9.7	0-10
Cobalt	50.0	57.7	15.4	0-10
Copper	64.9	67.7	4.3	0-10
Iron	158000	176000	11.8	0-10
Lead	264	292	10.9	0-10
Magnesium	12300	13500	9.7	0-10
Manganese	607	690	13.7	0-10
Molybdenum	anr			
Nickel	79.6	97.2	22.0	0-10
Potassium	6880	8120	18.1	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	2310	2560	10.9 (a)	0-10
Thallium	0.00	0.00	NC	0-10
Tin	anr			
Vanadium	262	286	9.2	0-10
Zinc	205	454	121.6	0-10

Associated samples MP2121: F4951-9R

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

OVERVIEW

Five (5) soil samples were analyzed for lead by EPA SW-846 Method 6010, and three (3) of these samples were also analyzed for TAL metals by EPA SW-846 Methods 6010 and 7471. The laboratory gave the samples analyzed for the TAL metals the suffix CR. No site-specific Quality Control samples were analyzed. Accutest Laboratories, located in Orlando, FL, performed the analyses.

SUMMARY

These samples were analyzed successfully.

MAJOR PROBLEMS

No major problems with the validity of the analytical data were found.

MINOR PROBLEMS

- Lead was recovered high during the initial low concentration calibration of October 5.
- Continuing calibration blanks contained estimated concentrations of aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, cobalt, iron, lead, magnesium, manganese, nickel, thallium, vanadium and zinc. Sample results with concentrations less than five (5) times the blank concentration are qualified as blank contaminated (B).
- For samples 707-134C, 707-278CR and 707-134CR:
 - Matrix spike recoveries were low (<75%) for antimony, manganese, silver and sodium on October 2, while the matrix spike duplicate on that date was recovered low for aluminum, antimony and silver.
 - The serial dilution RPD was high for lead.
- For samples 404-133C, 404-167C, 404-144C, 707-278C and 404-167CR:
 - Matrix spike recoveries were low (<75%) for lead, silver, sodium and vanadium, and high (>125%) for magnesium and manganese. Matrix spike duplicate recoveries were low for antimony, and high for copper, lead, magnesium, manganese and potassium.
 - The duplicate analysis had a high RPD for aluminum, arsenic, calcium, copper, lead, magnesium, manganese, nickel, potassium, vanadium and zinc.
 - Serial dilution RPDs were high for aluminum, barium, calcium, chromium, copper, lead, magnesium, manganese, nickel, potassium, vanadium and zinc.

NOTES

- Continuing calibration blanks of October 1 contained estimated concentrations of lead. One of four continuing calibration blanks analyzed on October 5 contained estimated concentrations of aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, cobalt, iron, magnesium, manganese, nickel, thallium, vanadium and zinc.
- The average relative percent difference between the total lead results and lead results from the TAL metals analyses for the three (3) samples that had both analyses performed is 3.06 percent
- For samples 707-134C, 707-278CR and 707-134CR:
 - The duplicate analysis had a high RPD for antimony, although no qualification is necessary due to the low sample concentration.
- For samples 404-133C, 404-167C, 404-144C, 707-278C and 404-167CR:
 - The duplicate analysis had high RPDs for antimony, barium, cobalt and sodium, although no qualification is necessary due to the low sample concentration.

REPORT CONTENT STATEMENT

These data were reviewed in accordance with USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses. The text of this report only addresses items that affect the validity of the data contained therein.

ATTACHMENT A

Glossary of Data Qualifiers

Glossary of Data Qualifier Codes

Codes Relating to Identification

(Confidence Concerning Presence or Absence of Compounds)

U = Not Detected. The associated number indicates the approximate sample concentration necessary to be detected.

(No Code) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm the presence or absence in future sampling efforts.

Codes Related to Quantitation

(Can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

Other Codes

Q = No analytical result.

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

ATTACHMENT B

Data Summary Forms

Data Summary Table

1 of 1

Site: FNTC - Bainbridge - Small Arms Ranges Confirmation Results

Lab: Accutest

Reviewer: Michael J. Lacy, Ph.D.

Date: 08 October 1999

Report Number: F4960

Sample I.D.	404-133C	404-167C	404-144C	707-278C	707-134C
Matrix	Soil	Soil	Soil	Soil	Soil
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date Sampled	9/25/1999	9/25/1999	9/25/1999	9/23/1999	9/23/1999
Time Sampled	1112	1148	1151	1133	1457
% Moisture	22.7	11.5	11.7	18.2	17.4
pH	N/A	N/A	N/A	N/A	N/A
Dilution Factor	1.0	1.0	1.0	1.0	1.0
	Result VQ	Result VQ	Result VQ	Result VQ	Result VQ
Lead	17.5 JBL	187 JL	21.1 JBL	33.6 JBL	79.9 JBL

Aluminum	---	9920 J	---	13800 K	15600 K
Antimony	---	1.3 JBL	---	<0.28 UL	0.73 JBL
Arsenic	---	3.9 JB	---	28 B	2.7 B
Barium	---	59.5 J	---	30.2	39.1
Beryllium	---	0.71 B	---	0.62 B	0.76 B
Cadmium	---	<0.04 U	---	<0.04 U	<0.04 U
Calcium	---	2110 J	---	228 JB	568
Chromium	---	10.0 JB	---	13.9	5.1 B
Cobalt	---	5.6 B	---	39 JB	3 JB
Copper	---	8.1 JBK	---	65 B	4.2 B
Iron	---	10500	---	13400	10300
Lead	---	190 LJ	---	32.2 LJ	82.6 LJ
Magnesium	---	1250 JK	---	1000	948
Manganese	---	437 JK	---	54.6 L	52.6 L
Mercury	---	0.02 JB	---	0.02 JB	<0.01 U
Nickel	---	6.4 JB	---	62 B	3.9 JB
Potassium	---	590 JK	---	501 B	933
Selenium	---	<0.22 U	---	<0.22 U	<0.23 U
Silver	---	<0.11 UL	---	<0.10 UL	<0.11 UL
Sodium	---	259 BL	---	165 BL	197 BL
Thallium	---	<0.29 U	---	<0.29 U	<0.30 U
Vanadium	---	18.0 JL	---	22.2 L	11.2 L
Zinc	---	38.2 J	---	19.7 B	32.0 B

VQ - Validation Qualifier

ATTACHMENT C

Laboratory Reported Results



Report of Analysis

Page 1 of 1

Client Sample ID: 404-133C

Lab Sample ID: F4960-1

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/25/99

Date Received: 09/28/99

Percent Solids: 85.0

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	17.5	11.1	mg/kg	1	10/01/99	10/01/99 SJL	SW846 6010A

RDL = Reported Detection Limit



Report of Analysis

Page 1 of 1

Client Sample ID: 404-167C

Lab Sample ID: F4960-2

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/25/99

Date Received: 09/28/99

Percent Solids: 85.6

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	187	10.9	mg/kg	1	10/01/99	10/01/99 SJL	SW846 6010A

RDL = Reported Detection Limit

000004



ACCUTEST
LABORATORIES SOUTHEAST, INC.

Report of Analysis

Page 1 of 1

Client Sample ID: 404-144C	Date Sampled: 09/25/99
Lab Sample ID: F4960-3	Date Received: 09/28/99
Matrix: SO - Soil	Percent Solids: 88.1
Project: Bainbridge	

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	21.1	11.7	mg/kg	1	10/01/99	10/01/99 SJL	SW846 6010A

RDL = Reported Detection Limit

000005



Report of Analysis

Page 1 of 1

Client Sample ID: 707-278C

Lab Sample ID: F4960-4

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/23/99

Date Received: 09/28/99

Percent Solids: 89.3

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	33.6	11.2	mg/kg	1	10/01/99	10/01/99 SJL	SW846 6010A

RDL = Reported Detection Limit

000006



ACCUTEST
LABORATORIES SOUTHEAST, INC.

Report of Analysis

Page 1 of 1

Client Sample ID: 707-134C

Lab Sample ID: F4960-5

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/23/99

Date Received: 09/28/99

Percent Solids: 85.4

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	79.9	11.2	mg/kg	1	10/02/99	10/01/99 SJL	SW846 6010A

RDL = Reported Detection Limit

00000

Client Sample ID: 404-167C

Lab Sample ID: F4960-2R

Matrix: SO - Soil

Date Sampled: 09/25/99

Date Received: 09/30/99

Percent Solids: 85.6

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	9920	21.8	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Antimony	1.3 B	6.6	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Arsenic	3.9	1.1	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Barium	59.5	21.8	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Beryllium	0.71	0.55	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Cadmium	0.04 U	0.44	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Calcium	2110	546	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Chromium	10.0	1.1	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Cobalt	5.6	5.5	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Copper	8.1	2.7	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Iron	10500	10.9	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Lead	190	10.9	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Magnesium	1250	546	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Manganese	437	1.6	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Mercury	0.02 B	0.18	mg/kg	1	10/02/99	10/04/99 SJL	SW846 7471A
Nickel	6.4	4.4	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Potassium	590	546	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Selenium	0.22 U	10.9	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Silver	0.11 U	1.1	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Sodium	259 B	546	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Thallium	0.29 U	1.1	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Vanadium	18.0	5.5	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A
Zinc	38.2	2.2	mg/kg	1	10/01/99	10/05/99 JK	SW846 6010A

RDL = Reported Detection Limit

Client Sample ID: 707-278C

Lab Sample ID: F4960-4R

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/23/99

Date Received: 09/30/99

Percent Solids: 89.3

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	13800	21.5	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Antimony	0.26 U	6.5	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Arsenic	2.8	1.1	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Barium	30.2	21.5	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Beryllium	0.62	0.54	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Cadmium	0.04 U	0.43	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Calcium	228 B	538	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Chromium	13.9	1.1	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Cobalt	3.9 B	5.4	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Copper	6.5	2.7	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Iron	13400	10.8	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Lead	32.2	10.8	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Magnesium	1000	538	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Manganese	54.6	1.6	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Mercury	0.02 B	0.18	mg/kg	1	10/02/99	10/04/99 SJL	SW846 7471A
Nickel	6.2	4.3	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Potassium	501 B	538	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Selenium	0.22 U	10.8	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Silver	0.10 U	1.1	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Sodium	165 B	538	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Thallium	0.29 U	1.1	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Vanadium	22.2	5.4	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Zinc	19.7	2.2	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A

RDL = Reported Detection Limit

Client Sample ID: 707-134C

Lab Sample ID: F4960-5R

Matrix: SO - Soil

Date Sampled: 09/23/99

Date Received: 09/30/99

Percent Solids: 85.4

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	15600	22.3	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Antimony	0.73 B	6.7	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Arsenic	2.7	1.1	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Barium	39.1	22.3	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Beryllium	0.76	0.56	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Cadmium	0.04 U	0.45	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Calcium	568	558	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Chromium	5.1	1.1	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Cobalt	3.0 B	5.6	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Copper	4.2	2.8	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Iron	10300	11.2	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Lead	82.6	11.2	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Magnesium	948	558	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Manganese	52.6	1.7	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Mercury	0.01 U	0.18	mg/kg	1	10/02/99	10/04/99 SJL	SW846 7471A
Nickel	3.9 B	4.5	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Potassium	933	558	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Selenium	0.23 U	11.2	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Silver	0.11 U	1.1	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Sodium	197 B	558	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Thallium	0.30 U	1.1	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Vanadium	11.2	5.6	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A
Zinc	32.0	2.2	mg/kg	1	10/02/99	10/05/99 JK	SW846 6010A

RDL = Reported Detection Limit

ATTACHMENT D

Laboratory Reported Tentatively Identified Compounds

(Not Applicable)

ATTACHMENT E

Support Documentation

ANALYSIS R, TEST AND CHAIN OF CUSTODY RECORD *



Project Name/No. 1 *Bridgely 748439* Samples Shipment Date 7 *9/27/99*
 Sample Team Members 2 *Trester/Klinger*
 Profit Center No. 3 *—*
 Project Manager 4 *L. Stearns*
 Purchase Order No. 6 *792939-607*
 Required Report Date 11 *3 days*

Bill to: 5 *IT Corp*
2790 Mosside Blvd
Monroeville, PA 15146

Report to: 10 *Dorothy Small*
Larry Stearns
IT Corp
2790 Mosside Blvd
Monroeville, PA 15146

ONE CONTAINER PER LINE

Sample Number 14	Sample 15	Date/Time 16	Container 17	Sample 18	Pre 19	Requested Testing 20	Condition on 2	Disposal 22
404-133C	Comp 3pt Soil Bldg 404 Grid P4	9/25/99 11:12	1-803	4°C	~203	Total Lead 6010	<i>F4960-1</i>	MS/MSD
404-167C	Comp 3pt Soil Bldg 404 Grid P7	9/25/99 11:48	1-403	4°C	203	Total Lead 6010	<i>-2</i>	
404-144C	Comp 3pt Soil Bldg 404 Grid P8	9/25/99 11:51	1-403	4°C	203	Total Lead 6010	<i>3</i>	
707-278C	Comp 3pt Soil Bldg 707 Grid P6	9/23/99 11:33	1-803	4°C	203	Total Lead 6010	<i>4</i>	
707-134C	Comp 3pt Soil Bldg 707 Grid P9	9/23/99 14:57	1-803	4°C	~203	Total Lead 6010	<i>-5</i>	
*** Hold all of the above samples / extracts (404-133C through 707-134C) for further analysis								

Special Instructions: 23 *E-mail results to Dorothy Small*

Possible Hazard Identification: 24 *Lead*

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒ *X*

Turnaround Time Required: 26 ☐ Normal ☒ Rush *3 days*

GC Level: 27 ☐ I ☐ II ☒ III *X*

Project Specific (specify): *Very AFSC Level C*

1. Received by 28 *Cheryl Stearns*
 Date: *9/27/99* Time: *1730* (Signature/Affiliation)

2. Received by
 Date: Time: (Signature/Affiliation)

3. Received by
 Date: Time: (Signature/Affiliation)

Comments: 29 *Dict Trester*
for results to 410-378-3232
Coyle rly?

Accutest Laboratories Southeast
Case Narrative

Job (SDG) No.: 1-5

Samples: F4960

Analysis Performed: Metall

1) **Sample Receipt Conformance / Non-Conformance Summary**

Custody Seals on Coolers?	Yes <input checked="" type="checkbox"/> ()	No ()
Custody Seals in Tact?	Yes <input checked="" type="checkbox"/> ()	No ()
Chain of Custody Sealed in Plastic?	Yes <input checked="" type="checkbox"/> ()	No ()
Chain of Custody Filled out Properly?	Yes <input checked="" type="checkbox"/> ()	No ()
Enough ice and Packing material?	Yes <input checked="" type="checkbox"/> ()	No ()
All Bottles Sealed?	Yes <input checked="" type="checkbox"/> ()	No ()
Any Bottles Broken?	Yes ()	No <input checked="" type="checkbox"/> ()
Labels in good condition?	Yes <input checked="" type="checkbox"/> ()	No ()
Labels agree with chain of custody?	Yes <input checked="" type="checkbox"/> ()	No ()
Correct Containers Used?	Yes <input checked="" type="checkbox"/> ()	No ()
Preserved Properly?	Yes <input checked="" type="checkbox"/> ()	No ()
Sufficient Sample?	Yes <input checked="" type="checkbox"/> ()	No ()

Comments: _____

000043

Job# F4960

Accutest Laboratories Southeast
Case Narrative

3) Metals Conformance / Non-conformance Summary

Blank level below reporting limits? MP 2115, MP2112 Yes (✓) No ()
MP2111

If no, list analytes above reporting limits: _____

Spike blank (LCS) data within acceptable Limits? MP 2115, MP2112 Yes (✓) No ()
MP2111

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

Matrix spike data within acceptable limits? Yes () No (✓)

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: See page 49-52 for details Sb, Mn, Ag, Na, V, Cu, Al, Be, Co, Fe, Pb, Mg, K, Ti, Ca

Matrix duplicate data within acceptable limits? Yes () No (✓)

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: See Above
See pages 49-52 for details

Samples prepared and analyzed within holding time? Yes (✓) No ()

If holding times were not met, list analytes where holding times were exceeded and explain: _____

All analytical criteria met (calibration, CCV, ICV, CCB, etc.)? Yes (✓) No ()

If not met, list effected samples and analytes: _____

Comments: MS/MSD failures due to target analytes in matrix

Memo to File

From:

Linda Williams

cc:

F4960, Facey, & Heather

Date:

9/30

Re:

Relogs

Per Dick Greuter's request

Sample F4960-2, F4960-4, & F4960-5

Should be run for TAL Metals w/

a 24 hr TAT. Here sample ID's

are as followed: 404-167C, 707-278C
and 707-134C.

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F4960
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

File ID: IR1001M1.ASC
 QC Limits: 70 to 130 % Recovery

Date Analyzed: 10/01/99
 Run ID: MA1569

Methods: EPA 200.7, SW846 6010A
 Units: ug/l

Metal	CRI True	CRIA True	CRIA Results	% Rec	CRI Results	% Rec
Aluminum	200					
Antimony		5.0				
Arsenic		10	anr			
Barium	200					
Beryllium	5.0					
Cadmium	5.0					
Calcium	1000					
Chromium	10					
Cobalt	50					
Copper	25					
Iron	300					
Lead		5.0	3.8B	76.0		
Magnesium	5000					
Manganese	15					
Molybdenum	50					
Nickel	40					
Potassium	5000					
Selenium		10	anr			
Silver	10					
Sodium	5000					
Thallium		10	anr			
Tin	50					
Vanadium	50					
Zinc	20					

(*) Outside of QC limits
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F4960
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2112
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 10/01/99

Metal	RDL	IDL	MB raw	final
Aluminum	20	3	14.5	<20
Antimony	6.0	.239	-0.85	<6.0
Arsenic	1.0	.345	-0.20	<1.0
Barium	20	.039	0.0010	<20
Beryllium	0.50	.0363	0.17	<0.50
Cadmium	0.40	.033	-0.060	<0.40
Calcium	500	1.95	-0.90	<500
Chromium	1.0	.0637	-0.026	<1.0
Cobalt	5.0	.0797	-0.024	<5.0
Copper	2.5	.0747	-0.41	<2.5
Iron	10	3.2	8.3	<10
Lead	10	.159	-0.089	<10
Magnesium	500	1.76	0.31	<500
Manganese	1.5	.016	0.019	<1.5
Molybdenum	5.0	.068	anr	
Nickel	4.0	.1	-0.045	<4.0
Potassium	500	2.82	-1.0	<500
Selenium	10	.204	0.34	<10
Silver	1.0	.0963	0.22	<1.0
Sodium	500	15.3	-9.8	<500
Thallium	1.0	.269	0.15	<1.0
Tin	5.0	.223	anr	
Vanadium	5.0	.0717	-0.015	<5.0
Zinc	2.0	.083	-0.049	<2.0

Associated samples MP2112: F4960-1, F4960-2, F4960-3, F4960-4, F4960-2R

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F4960
Account: ITPAMONK - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2111
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 10/02/99

Metal	RDL	IDL	MB raw	final
Aluminum	20	3	4.5	<20
Antimony	6.0	.239	-0.49	<6.0
Arsenic	1.0	.345	-0.27	<1.0
Barium	20	.039	1.3	<20
Beryllium	0.50	.0363	0.17	<0.50
Cadmium	0.40	.033	-0.035	<0.40
Calcium	500	1.95	33.5	<500
Chromium	1.0	.0637	0.010	<1.0
Cobalt	5.0	.0797	-0.031	<5.0
Copper	2.5	.0747	0.039	<2.5
Iron	10	3.2	0.98	<10
Lead	10	.159	1.9	<10
Magnesium	500	1.76	1.9	<500
Manganese	1.5	.016	0.090	<1.5
Molybdenum	5.0	.068	anr	
Nickel	4.0	.1	0.62	<4.0
Potassium	500	2.82	2.6	<500
Selenium	10	.204	0.39	<10
Silver	1.0	.0963	0.27	<1.0
Sodium	500	15.3	110	<500
Thallium	1.0	.269	-0.051	<1.0
Tin	5.0	.223	anr	
Vanadium	5.0	.0717	-0.053	<5.0
Zinc	5.0	.083	4.6	<5.0

Associated samples MP2111: F4960-5, F4960-4R, F4960-5R

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

000040

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4960
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1001M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/01/99
Run ID: MA1569

Methods: EPA 200.7, SW846 6010A
Units: ug/l

Metal	RDL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	anr							
Calcium	1000	19.5	anr							
Chromium	10	.617	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	0.40	<5.0	0.1	<5.0	-1.4	<5.0	-0.80	<5.0
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

000057

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4960
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1001M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/01/99
Run ID: MA1569

Methods: EPA 200.7, SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	anr							
Calcium	1000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	7.5	<100	4.0	<5.0B	1.8	<5.0B	6.0	<15
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

000036

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4960
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1001M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/01/99
Run ID: MA1569

Methods: EPA 200.7, SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	anr							
Calcium	1000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	2.4	<5.0B	12.0	<15	2.8	<5.0	1.9	<5.0
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4960
Account: ITPAMONK - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1001M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/01/99
Run ID: MA1569

Methods: EPA 200.7, SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr					
Antimony	5.0	2.39	anr					
Arsenic	10	3.4	anr					
Barium	200	.39	anr					
Beryllium	5.0	.36	anr					
Cadmium	5.0	.33	anr					
Calcium	1000	19.5	anr					
Chromium	10	.637	anr					
Cobalt	50	.797	anr					
Copper	25	.747	anr					
Iron	300	32	anr					
Lead	5.0	1.59	0.12	<5.0	2.0	<5.0	-0.70	<5.0
Magnesium	5000	17.6	anr					
Manganese	15	.16	anr					
Molybdenum	50	.68	anr					
Nickel	40	1	anr					
Potassium	5000	28.2	anr					
Selenium	10	2	anr					
Silver	10	.96	anr					
Sodium	5000	153	anr					
Thallium	10	2.69	anr					
Tin	50	2.2	anr					
Vanadium	50	.717	anr					
Zinc	20	.83	anr					

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4960
Account: ITPAMONK - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: HG1004S1.HGD Date Analyzed: 10/04/99 Methods: SW846 7471A
OC Limits: result < RDL Run ID: MA1573 Units: ug/l

Metal	RDL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Mercury	1.0	.06	0.043	<1.0	0.065	<1.0	0.021	<1.0	0	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4960
Account: ITPAMONK - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1005M1.ASC Date Analyzed: 10/05/99 Methods: SW846 6010A
QC Limits: result < RDL Run ID: MA1574 Units: ug/l

Metal	RDL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	24.5	<200	25.6	<200	69.7	<200	16.5	<200
Antimony	60	2.39	6.0	<200	3.0	<200	-0.44	<200	2.6	<200
Arsenic	10	3.4	3.0	<500	1.4	<500	5.1	<500	1.5	<500
Barium	200	.39	1.2	<1000	1.1	<1000	1.7	<1000	0.60	<1000
Beryllium	5.0	.36	1.3	<5.0	1.2	<5.0	2.0	<5.0	1.1	<5.0
Cadmium	4.0	.33	1.3	<50	1.3	<50	1.8	<50	0.34	<50
Calcium	5000	19.5	21.4	<5000	20.1	<5000	110	<5000	6.2	<5000
Chromium	10	.637	1.1	<50	1.5	<50	1.6	<50	0.60	<50
Cobalt	50	.797	1.3	<50	1.1	<50	1.7	<50	0.92	<50
Copper	25	.747	0.85	<25	0.54	<25	2.6	<25	-1.8	<25
Iron	100	32	25.0	<100	26.2	<100	47.6	<100	15.7	<100
Lead	100	1.59	0.30	<500	0.060	<500	1.8	<500	0.84	<500
Magnesium	5000	17.6	20.3	<5000	18.1	<5000	78.3	<5000	11.8	<5000
Manganese	15	.16	1.1	<15	1.1	<15	1.6	<15	0.46	<15
Molybdenum	50	.68	anr							
Nickel	40	1	0.90	<40	1.4	<40	2.5	<40	0.28	<40
Potassium	5000	28.2	18.4	<5000	14.2	<5000	22.1	<5000	14.5	<5000
Selenium	100	2	3.6	<500	0.70	<500	4.1	<500	0.49	<500
Silver	10	.96	0.59	<50	0.92	<50	0.62	<50	0.74	<50
Sodium	5000	153	-110	<5000	-260	<5000	-92	<5000	-40	<5000
Thallium	10	2.69	4.4	<500	2.5	<500	5.6	<500	2.4	<500
Tin	50	2.2	anr							
Vanadium	50	.717	1.6	<50	1.1	<50	1.9	<50	0.41	<50
Zinc	20	.83	1.6	<20	1.8	<20	7.6	<20	0.11	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4960
Account: ITPAMONK - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1005M1.ASC Date Analyzed: 10/05/99 Methods: SW846 6010A
QC Limits: result < RDL Run ID: MA1574 Units: ug/l

Metal	RDL	IDL	CCB raw	final
Aluminum	200	30	35.1	<200B
Antimony	60	2.39	4.4	<60.0B
Arsenic	10	3.4	4.3	<10.0B
Barium	200	.39	1.2	<200B
Beryllium	5.0	.36	1.5	<5.0B
Cadmium	4.0	.33	1.1	<4.0B
Calcium	5000	19.5	22.7	<5000B
Chromium	10	.637	1.9	<10.0B
Cobalt	50	.797	1.4	<50.0B
Copper	25	.747	-0.70	<25.0
Iron	100	32	45.9	<100B
Lead	100	1.59	1.0	<100
Magnesium	5000	17.6	21.8	<5000B
Manganese	15	.16	1.8	<15.0B
Molybdenum	50	.68	anr	
Nickel	40	1	1.7	<40.0B
Potassium	5000	28.2	17.4	<5000
Selenium	100	2	-0.40	<100
Silver	10	.96	0.40	<10.0
Sodium	5000	153	-91.3	<5000
Thallium	10	2.69	2.8	<10.0B
Tin	50	2.2	anr	
Vanadium	50	.717	1.4	<50.0B
Zinc	20	.83	0.80	<20.0B

(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4960
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2111
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date: 10/02/99 10/02/99

Metal	M9189-1 Original DUP		RPD	QC Limits	M9189-1 Original MS		Spikelot MPFLICP % Rec		QC Limits
Aluminum	9500	9520	0.2	0-20	9500	12700	3050	104.9	80-120
Antimony	0.39	0.90	79.1 (a)	0-20	0.39	55.1	105	52.0N	80-120
Arsenic	33.5	32.0	4.6	0-28	33.5	368	421	79.5	72-110
Barium	51.7	47.7	8.0	0-14	51.7	426	421	88.9	64-116
Beryllium	0.67	0.65	3.0	0-20	0.67	9.3	10	82.0	80-120
Cadmium	0.0	0.0	NC	0-16	0.0	8.6	10	81.7	64-120
Calcium	1220	1160	5.0	0-20	1220	3430	2630	84.0	60-120
Chromium	17.5	16.5	5.9	0-33	17.5	51.8	42.1	81.5	66-119
Cobalt	7.5	7.5	0.0	0-20	7.5	92.1	105	80.4	80-120
Copper	48.2	44.8	7.3	0-39	48.2	97.7	52.6	94.1	65-124
Iron	14300	14300	0.0	0-20	14300	17100	2840	98.6	80-120
Lead	14.5	13.7	5.7	0-44	14.5	99.5	105	80.8	60-127
Magnesium	3380	3380	0.0	0-20	3380	5680	2630	87.4	80-120
Manganese	209	202	3.4	0-20	209	286	105	73.2N	80-120
Molybdenum	anr								
Nickel	18.9	18.2	3.8	0-30	18.9	107	105	83.7	71-119
Potassium	1990	1900	4.6	0-20	1990	4190	2630	83.6	80-120
Selenium	0.0	0.0	NC	0-28	0.0	348	421	82.7	65-115
Silver	0.0	0.0	NC	0-21	0.0	6.6	10	62.7N	63-123
Sodium	141	143	1.4	0-20	141	2110	2630	74.9N	80-120
Thallium	0.0	0.0	NC	0-20	0.0	341	421	81.0	80-120
Tin	anr								
Vanadium	18.9	18.5	2.1	0-20	18.9	103	105	79.9N	80-120
Zinc	31.6	30.8	2.6	0-31	31.6	115	105	79.3	69-120

Associated samples MP2111: F4960-5, F4960-4R, F4960-5R

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4960
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2111
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 10/02/99

Metal	M9189-1 Original	MSD	Spikelot MPFLICP	% Rec	QC Limits
Aluminum	9500	13700	3140	133.7N	80-120
Antimony	0.39	62.7	108	57.5N	80-120
Arsenic	33.5	403	433	85.3	72-110
Barium	51.7	469	433	96.3	64-116
Beryllium	0.67	10.2	10.8	88.0	80-120
Cadmium	0.0	9.6	11	88.6	64-120
Calcium	1220	3910	2710	99.3	80-120
Chromium	17.5	56.2	43.3	89.3	66-119
Cobalt	7.5	102	108	87.2	80-120
Copper	48.2	98.5	54.2	92.9	65-124
Iron	14300	17600	2920	112.8	80-120
Lead	14.5	108	108	86.3	60-127
Magnesium	3380	5940	2710	94.5	80-120
Manganese	209	320	108	102.5	80-120
Molybdenum					
Nickel	18.9	117	108	90.6	71-119
Potassium	1990	4310	2710	85.7	80-120
Selenium	0.0	381	433	87.9	65-115
Silver	0.0	7.3	11	67.4	63-123
Sodium	141	2310	2710	80.1	80-120
Thallium	0.0	380	433	87.7	80-120
Tin					
Vanadium	18.9	113	108	86.9	80-120
Zinc	31.6	126	108	87.1	69-120

Associated samples MP2111: F4960-5, F4960-4R, F4960-5R

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

000000

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4960
 Account: ITPAMONK - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2112
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date: 10/01/99

10/01/99

Metal	F4960-4 Original DUF		RPD	QC Limits	F4960-4 Original MS		Spike/lot MPFLICP	% Rec	QC Limits
Aluminum	14200	9180	42.9*	0-20	14200	11900	3215.33	-69.7(b)	80-120
Antimony	0.0	0.61	200.0(a)	0-20	0.0	57.4	110.87	51.7N	80-120
Arsenic	2.5	31.5	170.8*	0-28	2.5	355	443.49	79.6	72-110
Barium	33.6	46.4	32.1 (a)	0-14	33.6	408	443.49	84.4	64-116
Beryllium	0.73	0.61	17.8	0-20	0.73	9.2	11.09	76.6N	80-120
Cadmium	0.0	0	NC	0-16	0.0	8.6	11.09	77.7	64-120
Calcium	241	1110	128.6*	0-20	241	3350	2771.83	112.3	80-120
Chromium	14.4	16.3	12.9	0-33	14.4	49.3	44.35	78.9	66-119
Cobalt	4.0	7.6	62.1 (a)	0-20	4.0	91.2	110.87	78.6N	80-120
Copper	6.7	76.2	167.6*	0-39	6.7	72.0	55.44	117.7	65-124
Iron	14100	13400	4.5	0-20	14100	15700	2993.58	56.2 (b)	80-120
Lead	33.6	10.6	103.8*	0-44	33.6	93.6	110.87	54.1N	60-127
Magnesium	1080	3150	97.8*	0-20	1080	5300	2771.83	152.2N	80-120
Manganese	57.2	191	107.8*	0-20	57.2	292	110.87	211.6N	80-120
Molybdenum	anr								
Nickel	6.6	17.4	90.4*	0-30	6.6	102	110.87	86.6	71-119
Potassium	498	1810	113.9*	0-20	498	3960	2771.83	124.9N	80-120
Selenium	0.0	0	NC	0-28	0.0	341	443.49	77.0	65-115
Silver	0	0.0	NC	0-21	0	6.8	11.09	60.9N	63-123
Sodium	164	218	28.3 (a)	0-20	164	2210	2771.83	73.9N	80-120
Thallium	0.00	0.00	NC	0-20	0.00	339	443.49	76.4N	80-120
Tin	anr								
Vanadium	23.1	17.5	27.7*	0-20	23.1	99.5	110.87	68.9N	80-120
Zinc	20.1	28.3	34.0*	0-31	20.1	110	110.87	80.9	69-120

Associated samples MP2112: F4960-1, F4960-2, F4960-3, F4960-4, F4960-2R

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) RPD acceptable due to low duplicate and sample concentrations.

(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

000001

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4960
 Account: ITPAMONK - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2112
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date: 10/01/99

Metal	F4960-4 Original MSD		Spikelot MPFLICP	% Rec	QC Limits
Aluminum	14200	12800	2873.88	-46.6(a)	80-120
Antimony	0.0	52.7	99.1	53.2N	80-120
Arsenic	2.5	344	396.4	86.3	72-110
Barium	33.6	398	396.4	92.0	64-116
Beryllium	0.73	8.9	9.91	82.4	80-120
Cadmium	0.0	8.3	9.91	83.5	64-120
Calcium	241	3270	2477.48	122.4N	80-120
Chromium	14.4	49.9	39.64	89.7	66-119
Cobalt	4.0	88.8	99.1	85.6	80-120
Copper	6.7	133	49.55	255.8N	65-124
Iron	14100	17000	2675.68	110.5	80-120
Lead	33.6	576	99.1	547.7N	60-127
Magnesium	1080	5470	2477.48	177.0N	80-120
Manganese	57.2	294	99.1	239.1N	80-120
Molybdenum					
Nickel	6.6	102	99.1	96.1	71-119
Potassium	498	4060	2477.48	143.8N	80-120
Selenium	0.0	325	396.4	82.1	65-115
Silver	0	6.4	9.91	64.6	63-123
Sodium	164	2070	2477.48	76.8N	80-120
Thallium	0.00	319	396.4	80.4	80-120
Tin					
Vanadium	23.1	98.8	99.1	76.3N	80-120
Zinc	20.1	112	99.1	92.3	69-120

Associated samples MP2112: F4960-1, F4960-2, F4960-3, F4960-4, F4960-2R

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

000002

SERIAL DILUTION RESULTS SUMMARY

Login Number: F4960
 Account: ITPAMONK - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2112
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: ug/l

Prep Date: 10/01/99

Metal	F4960-4 Original	SPL 1:5	RPD	QC Limits
Aluminum	127000	85700	32.3	0-10
Antimony	0.00	0.00	NC	0-10
Arsenic	22.1	315	1322.6(a)	0-10
Barium	300	425	41.8	0-10
Beryllium	6.49	10.9	67.3 (a)	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	4150	11000	109.2	0-10
Chromium	128	150	17.1	0-10
Cobalt	35.8	74.6	108.4(a)	0-10
Copper	59.9	282	371.3	0-10
Iron	126000	127000	1.4	0-10
Lead	300	121	59.6	0-10
Magnesium	9650	29700	207.5	0-10
Manganese	510	1880	268.6	0-10
Molybdenum	anr			
Nickel	58.8	160	173.0	0-10
Potassium	4450	15900	256.8	0-10
Selenium	0.00	21.7		0-10
Silver	0.00	0.00	NC	0-10
Sodium	1470	2370	61.7 (a)	0-10
Thallium	0.00	0.00	NC	0-10
Tin	anr			
Vanadium	206	164	20.4	0-10
Zinc	179	278	55.0	0-10

Associated samples MP2112: F4960-1, F4960-2, F4960-3, F4960-4, F4960-2R

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

000054

SERIAL DILUTION RESULTS SUMMARY

Login Number: F4960
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2111
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: ug/l

Prep Date: 10/02/99

Metal	M9189-1		RPD	QC Limits
	Original	SDL 1:5		
Aluminum	86800	88900	2.4	0-10
Antimony	3.60	0.00	100.0(a)	0-10
Arsenic	306	310	1.4	0-10
Barium	472	492	4.1	0-10
Beryllium	6.10	13.4	120.2(a)	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	11200	11600	3.6	0-10
Chromium	160	166	3.5	0-10
Cobalt	68.6	71.9	4.8	0-10
Copper	441	439	0.4	0-10
Iron	131000	133000	1.7	0-10
Lead	132	154	16.1*	0-10
Magnesium	30900	31500	1.8	0-10
Manganese	1910	1960	2.7	0-10
Molybdenum	anr			
Nickel	173	180	3.8	0-10
Potassium	18200	17200	5.4	0-10
Selenium	0.00	24.0		0-10
Silver	0.00	0.00	NC	0-10
Sodium	1280	0.00	100.0(a)	0-10
Thallium	0.00	0.00	NC	0-10
Tin	anr			
Vanadium	173	177	2.3	0-10
Zinc	289	310	7.2	0-10

Associated samples MP2111: F4960-5, F4960-4R, F4960-5R

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

000033

OVERVIEW

Six (6) soil samples were analyzed for lead by EPA SW-846 Method 6010. No site-specific Quality Control samples were analyzed. Accutest, located in Orlando, FL, performed the analyses.

SUMMARY

These samples were analyzed successfully.

MAJOR PROBLEMS

No major problems with the validity of the analytical data were found.

MINOR PROBLEMS

- The continuing calibration blanks contained lead at greater than the instrument detection limit. Sample results with concentrations less than five (5) times the blank concentration are qualified as blank contaminated (B).
- The serial dilution sample had a relative percent difference greater than ten (10) percent. The lead result should be qualified estimated (J).

NOTES

There are no notes associated with this validation report.

REPORT CONTENT STATEMENT

These data were reviewed in accordance with USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses. The text of this report only addresses items that affect the validity of the data contained therein.

ATTACHMENT A

Glossary of Data Qualifiers

Glossary of Data Qualifier Codes

Codes Relating to Identification

(Confidence Concerning Presence or Absence of Compounds)

U = Not Detected. The associated number indicates the approximate sample concentration necessary to be detected.

(No Code) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm the presence or absence in future sampling efforts.

Codes Related to Quantitation

(Can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

Other Codes

Q = No analytical result.

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

ATTACHMENT B

Data Summary Forms

Data Summary Table

1 of 1

Site: FNTC - Bainbridge - Small Arms Ranges Confirmation Results

Lab: Accutest

Reviewer: Michael J. Lacy, Ph.D.

Date: 21 October 1999

Report Number: F4970

Sample I.D.	204-554C		204-423C		204-98C		204-164C		204-159C		204-381C	
Matrix	Soil		Soil		Soil		Soil		Soil		Soil	
Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Date Sampled	9/28/1999		9/28/1999		9/28/1999		9/28/1999		9/28/1999		9/28/1999	
Time Sampled	0930		0933		0936		0939		0942		0945	
% Moisture	15.3		12.3		14.8		17.8		14.7		15.9	
pH	N/A		N/A		N/A		N/A		N/A		N/A	
Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0	
	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ
Lead	35.2	JB	11.2	JB	7.3	JB	7.1	JB	11.9	JB	61.5	J

VQ - Validation Qualifier

ATTACHMENT C

Laboratory Reported Results



ACCUTEST.

Report of Analysis

Page 1 of 1

Client Sample ID: 204-554C
Lab Sample ID: F4970-8
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/28/99
Date Received: 09/29/99
Percent Solids: 84.7

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	35.2	11.8	mg/kg	1	10/05/99	10/06/99 JK	SW846 6010A

RDL = Reported Detection Limit

000000



ACCUTEST.

Report of Analysis

Page 1 of 1

Client Sample ID: 204 164C

Lab Sample ID: F4970-11

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/28/99

Date Received: 09/29/99

Percent Solids: 87.7

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	11.2 B	12.0	mg/kg	1	10/05/99	10/06/99 JK	SW846 6010A

RDL = Reported Detection Limit



Report of Analysis

Page 1 of 1

Client Sample ID: 204-96C
Lab Sample ID: F4970-10
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/28/99
Date Received: 09/29/99
Percent Solids: 85.2

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	7.3 B	11.9	mg/kg	1	10/05/99	10/06/99 JK	SW846 6010A

RDL = Reported Detection Limit

000011



Report of Analysis

Page 1 of 1

Client Sample ID: 204-159C

Lab Sample ID: F4970-12

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/28/99

Date Received: 09/29/99

Percent Solids: 82.2

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	7.1 B	12.3	mg/kg	1	10/05/99	10/06/99 JK	SW846 6010A

RDL = Reported Detection Limit



Report of Analysis

Page 1 of 1

Client Sample ID: 204-423C

Lab Sample ID: F4970-9

Matrix: SO - Soil

Date Sampled: 09/28/99

Date Received: 09/29/99

Percent Solids: 85.3

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	11.9	11.2	mg/kg	1	10/05/99	10/06/99 JK	SW846 6010A

RDL = Reported Detection Limit

000010



Report of Analysis

Page 1 of 1

Client Sample ID:	204-381C	Date Sampled:	09/28/99
Lab Sample ID:	F4970-13	Date Received:	09/29/99
Matrix:	SO - Soil	Percent Solids:	84.1
Project:	Bainbridge		

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	61.5	11.5	mg/kg	1	10/05/99	10/06/99 JK	SW846 6010A

RDL = Reported Detection Limit

330014

ATTACHMENT D

Laboratory Reported Tentatively Identified Compounds

(Not Applicable)

ATTACHMENT E

Support Documentation



INTERNATIONAL
TECHNOLOGY
CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No.
Page 1 of 2

Project Name/No. 1 Barnbridge 798939 Samples Shipment Date 7 9/28/99
Sample Team Members 2 Treater/Klinger Lab Destination 8 Accutest Lab
Profit Center No. 3 Lab Contact 9 Linda Williams
Project Manager 4 L. Stearns Project Contact/Phone 12 Dick Treater
Purchase Order No. 6 798939-007 Carrier/Waybill No. 13 FedEx 79077559 9129
Required Report Date 11 3 days

Bill to: 5 IT Corp
2790 Mosside Blvd
Monroeville, PA 15146
Dorothy Small
Larry Stearns
IT Corp
2790 Mosside Blvd
Monroeville, PA 15146

ONE CONTAINER PER LINE

Sample Number ¹⁴	Sample Description/Type ¹⁵	Date/Time Collected ¹⁶	Container Type ¹⁷	Sample Volume ¹⁸	Pre-servative ¹⁹	Requested Testing Program ²⁰	Condition on Receipt ²¹	Disposal Record No. ²²
404-P1A	Comp Spt Soil Bldg 404 Pile 1A	9/28/99 1112	1-Bu3	Bu3	9°C	TCLP Lead 1311/6010	F49201	MSI/MSD
404-P2A	Comp Spt Soil Bldg 404 Pile 2A	9/28/99 1015					-2	
404-P3A	Comp Spt Soil Bldg 404 Pile 3A	9/28/99 1420					-3	
404-P5A	Comp Spt Soil Bldg 404 Pile 5A	9/28/99 0825					-4	
404-P6A	Comp Spt Soil Bldg 404 Pile 6A	9/28/99 1110					-5	
204-P8A	Comp Spt Soil Bldg 204 Pile 8A	9/28/99 1610					-6	
204-P1A	Comp Spt Soil Bldg 204 Pile 1A	9/28/99 1635					-7	
/	/	/	/	/	/	/	/	/

Special Instructions: ²³ E-mail results to Dorothy Small

Possible Hazard Identification: ²⁴ Lead

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: ²⁵

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

Turnaround Time Required: ²⁶

Normal ☐ Rush ☒ 3 days

QC Level: ²⁷

I. ☐ II. ☐ III. ☒ Project Specific (specify): Navy NFESC Level C

1. Relinquished by ²⁸ Dick Treater
(Signature/Affiliation) Dick Treater / IT

Date: 9/28/99
Time: 1730

1. Received by ²⁸ Abby Wilson
(Signature/Affiliation)

Date: 9/29/99
Time: 1100

2. Relinquished by
(Signature/Affiliation)

Date:
Time:

2. Received by
(Signature/Affiliation)

Date:
Time:

3. Relinquished by
(Signature/Affiliation)

Date:
Time:

3. Received by
(Signature/Affiliation)

Date:
Time:

Comments: ²⁹

Fax results to Dick Treater
410-378-3232

White: To accompany samples

Yellow: Field copy

* See back of form for special instructions

Accutest Laboratories Southeast
Case Narrative

Job (SDG) No.: F4970

Samples: 1-13

Analysis Performed: Metals

1) Sample Receipt Conformance / Non-Conformance Summary

Custody Seals on Coolers?	Yes <input checked="" type="checkbox"/> ()	No ()
Custody Seals in Tact?	Yes <input checked="" type="checkbox"/> ()	No ()
Chain of Custody Sealed in Plastic?	Yes <input checked="" type="checkbox"/> ()	No ()
Chain of Custody Filled out Properly?	Yes <input checked="" type="checkbox"/> ()	No ()
Enough ice and Packing material?	Yes <input checked="" type="checkbox"/> ()	No ()
All Bottles Sealed?	Yes <input checked="" type="checkbox"/> ()	No ()
Any Bottles Broken?	Yes ()	No <input checked="" type="checkbox"/> ()
Labels in good condition?	Yes <input checked="" type="checkbox"/> ()	No ()
Labels agree with chain of custody?	Yes <input checked="" type="checkbox"/> ()	No ()
Correct Containers Used?	Yes <input checked="" type="checkbox"/> ()	No ()
Preserved Properly?	Yes <input checked="" type="checkbox"/> ()	No ()
Sufficient Sample?	Yes <input checked="" type="checkbox"/> ()	No ()

Comments: _____

000017

Job # F4970

Accutest Laboratories Southeast
Case Narrative

3) Metals Conformance / Non-conformance Summary

Blank level below reporting limits?

Yes (✓)

No ()

If no, list analytes above reporting limits: MP2109, MP2121

Spike blank (LCS) data within acceptable Limits?

Yes (✓)

No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

MP2109, 2121

Matrix spike data within acceptable limits?

Yes (✓)

No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

MP2109, 2121

Matrix duplicate data within acceptable limits?

Yes (✓)

No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

MP2109, 2121

Samples prepared and analyzed within holding time?

Yes (✓)

No ()

If holding times were not met, list analytes where holding times were exceeded and explain: _____

All analytical criteria met (calibration, CCV, ICV, CCB, etc.)?

Yes (✓)

No ()

If not met, list affected samples and analytes: _____

MA1569 MA1576

Comments: _____

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4970
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1006M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/06/99
Run ID: MA1576

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	ICB raw	final	ICB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30								
Antimony	5.0	2.39								
Arsenic	10	3.4								
Barium	200	.39								
Beryllium	5.0	.36								
Cadmium	5.0	.33								
Calcium	1000	19.5								
Chromium	10	.637								
Cobalt	50	.797								
Copper	25	.747								
Iron	300	32								
Lead	5.0	1.59			1.9	<5.0B	2.7	<5.0B	3.9	<5.0B
Magnesium	5000	17.6								
Manganese	15	.16								
Molybdenum	50	.68								
Nickel	40	1								
Potassium	5000	28.2								
Selenium	10	2								
Silver	10	.86								
Sodium	5000	153								
Thallium	10	2.69								
Tin	50	2.2								
Vanadium	50	.717								
Zinc	20	.83								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4070
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1006M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/06/99
Run ID: MA1576

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	anr							
Calcium	1000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	1.8	<5.0B	1.9	<5.0B			2.9	<5.0
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	anr							
Silver	10	96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F1970
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1006M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/06/99
Run ID: MA1576

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final
Aluminum	200	30	anr			
Antimony	5.0	2.39	anr			
Arsenic	10	3.4	anr			
Barium	200	.39	anr			
Beryllium	5.0	.36	anr			
Cadmium	5.0	.33	anr			
Calcium	1000	19.5	anr			
Chromium	10	.637	anr			
Cobalt	50	.797	anr			
Copper	25	.747	anr			
Iron	300	32	anr			
Lead	5.0	1.59	5.9	<15	3.8	<5.0B
Magnesium	5000	17.6	anr			
Manganese	15	.16	anr			
Molybdenum	50	.68	anr			
Nickel	40	1	anr			
Potassium	5000	28.2	anr			
Selenium	10	2	anr			
Silver	10	.96	anr			
Sodium	5000	153	anr			
Thallium	10	2.69	anr			
Tin	50	2.2	anr			
Vanadium	50	.717	anr			
Zinc	20	.83	anr			

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4970
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1001M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/01/99
Run ID: MA1569

Methods: EPA 200.7, SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	anr							
Calcium	1000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	7.5	<100	4.0	<5.0B	1.8	<5.0B	6.0	<15
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

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BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4270
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1001M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/01/99
Run ID: MA1569

Methods: EPA 200.7, SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	anr							
Calcium	1000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	2.4	<5.0R	12.0	<15	2.8	<5.0	1.9	<5.0
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F4970
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2121
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 10/05/99

Metal	RDL	IDL	MB raw	final
Aluminum	20.0	3	anr	
Antimony	6.0	.24	anr	
Arsenic	1.0	.34	anr	
Barium	20.0	.04	anr	
Beryllium	0.50	.04	anr	
Cadmium	0.40	.03	anr	
Calcium	500	2	anr	
Chromium	1.0	.06	anr	
Cobalt	5.0	.08	anr	
Copper	2.5	.07	anr	
Iron	10.0	3.2	anr	
Lead	10.0	.16	1.4	<10.0
Magnesium	500	1.8	anr	
Manganese	1.5	.02	anr	
Molybdenum	5.0	.07	anr	
Nickel	4.0	.1	anr	
Potassium	500	2.8	anr	
Selenium	10.0	.2	anr	
Silver	1.0	.1	anr	
Sodium	500	15.3	anr	
Thallium	1.0	.27	anr	
Tin	5.0	.22	anr	
Vanadium	5.0	.07	anr	
Zinc	4.0	.08	anr	

Associated samples MP2121: F4970-8, F4970-9, F4970-10, F4970-11, F4970-12, F4970-13

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

OVERVIEW

Ten (10) soil samples were analyzed for lead by EPA SW-846 Method 6010. No site-specific Quality Control samples were analyzed. Accutest, located in Orlando, FL, performed the analyses.

SUMMARY

These samples were analyzed successfully.

MAJOR PROBLEMS

No major problems with the validity of the analytical data were found.

MINOR PROBLEMS

- The continuing calibration blanks contained lead at greater than the instrument detection limit. Sample results with concentrations less than five (5) times the blank concentration are qualified as blank contaminated (B).
- Matrix spike had a high recovery of lead. Lead results for these samples must be qualified biased high (K).
- The serial dilution sample had a relative percent difference greater than ten (10) percent. The lead result should be qualified estimated (J).

NOTES

- The low calibration standard for lead was recovered low, although the regular concentration standard was acceptably recovered. Therefore, the data were not qualified.
- The laboratory duplicate had a relative percent difference within the required 20 percent.

REPORT CONTENT STATEMENT

These data were reviewed in accordance with USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses. The text of this report only addresses items that affect the validity of the data contained therein.

ATTACHMENT A

Glossary of Data Qualifiers

Glossary of Data Qualifier Codes

Codes Relating to Identification

(Confidence Concerning Presence or Absence of Compounds)

U = Not Detected. The associated number indicates the approximate sample concentration necessary to be detected.

(No Code) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm the presence or absence in future sampling efforts.

Codes Related to Quantitation

(Can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

Other Codes

Q = No analytical result.

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

ATTACHMENT B

Data Summary Forms

Data Summary Table

1 of 1

Site: FNTC - Bainbridge - Small Arms Ranges Confirmation Results

Lab: Accutest

Reviewer: Michael J. Lacy, Ph.D.

Date: 21 October 1999

Report Number: F4975

Sample I.D.	204-548C		204-559C		204-442C		204-154C		204-484C		204-136C		204-390C		204-515C		204-400C		204-299C	
Matrix	Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil		Soil	
Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Date Sampled	9/28/1999		9/28/1999		9/28/1999		9/28/1999		9/28/1999		9/28/1999		9/28/1999		9/28/1999		9/28/1999		9/28/1999	
Time Sampled	1103		1106		1109		1112		1424		1427		1433		1436		1439		1448	
% Moisture	17.2		15.2		18.0		19.5		15.8		13.6		15.1		18.9		19.8		16.6	
pH	N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A		N/A	
Dilution Factor	1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0		1.0	
	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ
Lead	44.8	JBK	9.9	JBK	24.4	JBK	172	JBK	21.0	JBK	134	JK	113	JK	22.8	JBK	23.3	JBK	14.3	JBK

VQ - Validation Qualifier

ATTACHMENT C

Laboratory Reported Results



Report of Analysis

Page 1 of 1

Client Sample ID: 204-548C
Lab Sample ID: F4975-1
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/28/99
Date Received: 09/30/99
Percent Solids: 82.8

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	44.8	11.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit



Report of Analysis

Page 1 of 1

Client Sample ID: 204-559C

Lab Sample ID: F4975-2

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/28/99

Date Received: 09/30/99

Percent Solids: 84.8

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	9.9 B	11.6	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit



Report of Analysis

Page 1 of 1

Client Sample ID: 204-442C

Lab Sample ID: F4975-3

Matrix: SO - Soil

Date Sampled: 09/28/99

Date Received: 09/30/99

Percent Solids: 82.0

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	24.4	12.3	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit



Report of Analysis

Page 1 of 1

Client Sample ID: 204-154C

Lab Sample ID: F4975-4

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/28/99

Date Received: 09/30/99

Percent Solids: 80.5

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	17.2	11.7	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit



Report of Analysis

Page 1 of 1

Client Sample ID: 204-484C

Lab Sample ID: F4975-5

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/28/99

Date Received: 09/30/99

Percent Solids: 84.2

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	21.0	12.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

000000



Report of Analysis

Page 1 of 1

Client Sample ID: 204-136C

Lab Sample ID: F4975-6

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/28/99

Date Received: 09/30/99

Percent Solids: 86.4

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	134	12.3	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit



Report of Analysis

Page 1 of 1

Client Sample ID: 204-390C

Lab Sample ID: F4975-7

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/28/99

Date Received: 09/30/99

Percent Solids: 84.9

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	113	11.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

000003



ACCUTEST.

Report of Analysis

Page 1 of 1

Client Sample ID: 204-515C

Lab Sample ID: F4975-8

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/28/99

Date Received: 09/30/99

Percent Solids: 81.1

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	22.8	11.7	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

000003



Report of Analysis

Page 1 of 1

Client Sample ID: 204-400C

Lab Sample ID: F4975-9

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/28/99

Date Received: 09/30/99

Percent Solids: 80.2

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	23.3	12.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

6010A



Report of Analysis

Page 1 of 1

Client Sample ID: 204-299C

Lab Sample ID: F4975-10

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/28/99

Date Received: 09/30/99

Percent Solids: 83.4

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	14.3	11.6	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

000021

ATTACHMENT D

Laboratory Reported Tentatively Identified Compounds

(Not Applicable)

ATTACHMENT E

Support Documentation



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD *

Reference Document No. 559867
Page 1 of 2

Project Name/No. ¹ Bainbridge 798939 Samples Shipment Date ⁷ 9/29/99 Bill to: ⁵ IT Corp
Sample Team Members ² Treater/Klinger Lab Destination ⁸ Accutest Lab
407-425-6700
Profit Center No. ³ Lab Contact ⁹ Gude Williams
410-378-3450
Project Manager ⁴ L. Stearns Project Contact/Phone ¹² Dick Treater Final Report to: ¹⁰ Dorothy Small
Larry Stearns
Purchase Order No. ⁶ 798939-007 Carrier/Waybill No. ¹³ Fedex 792502225554 IT Corp
2790 Mossyde Blvd
Required Report Date ¹¹ 3 days Monroeville, PA 15146

ONE CONTAINER PER LINE

Sample ¹⁴ Number	Sample ¹⁵ Description/Type	Date/Time ¹⁶ Collected	Container ¹⁷ Type	Sample ¹⁸ Volume	Pre- ¹⁹ servative	Requested Testing ²⁰ Program	Condition on ²¹ Receipt	Disposal ²² Record No.
204-548C	Comp 3pt Soil Bldg 204 Grid P26	9/28/99 1103	1-803	403	402	Total Lead 6010	EX-1975-1	
204-559C	Comp 3pt Soil Bldg 204 Grid P27	9/28/99 1106		~203			EX-1975-2	
204-442C	Comp 3pt Soil Bldg 204 Grid P28	9/28/99 1109		~603			-3	MS/MSD
204-154C	Comp 3pt Soil Bldg 204 Grid P29	9/28/99 1112		~403			-4	
204-484C	Comp 3pt Soil Bldg 204 Grid P9	9/28/99 1424		~403			-5	
204-136C	Comp 3pt Soil Bldg 204 Grid P10	9/28/99 1427		~403			-6	
204-390C	Comp 3pt Soil Bldg 204 Grid P12	9/28/99 1433		~203			-7	
204-515C	Comp 3pt Soil Bldg 204 Grid P13	9/28/99 1436		~403			-8	

Special Instructions: ²³ E-mail results to Dorothy Small

Possible Hazard Identification: ²⁴ Lead

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: ²⁵

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

Turnaround Time Required: ²⁶

Normal ☐ Rush ☒ 3 days

QC Level: ²⁷

I. ☐ II. ☐ III. ☒ Project Specific (specify): Navy MFESC Level C

1. Relinquished by ²⁸ Dick Treater Date: 9/29/99
(Signature/Affiliation) Dick Treater / IT Time: 1730

1. Received by ²⁸ Abby Wilson Date: 9/30/99
(Signature/Affiliation) Time: 1100

2. Relinquished by Date:
(Signature/Affiliation) Time:

2. Received by Date:
(Signature/Affiliation) Time:

3. Relinquished by Date:
(Signature/Affiliation) Time:

3. Received by Date:
(Signature/Affiliation) Time:

Comments: ²⁹

Fax results to Dick Treater
410-378-3232

Accutest Laboratories Southeast
Case Narrative

Job (SDG) No.: F4975

Samples: 1-10

Analysis Performed: Metals

1) Sample Receipt Conformance / Non-Conformance Summary

Custody Seals on Coolers?	Yes <input checked="" type="checkbox"/> ()	No ()
Custody Seals in Tact?	Yes <input checked="" type="checkbox"/> ()	No ()
Chain of Custody Sealed in Plastic?	Yes <input checked="" type="checkbox"/> ()	No ()
Chain of Custody Filled out Properly?	Yes <input checked="" type="checkbox"/> ()	No ()
Enough ice and Packing material?	Yes <input checked="" type="checkbox"/> ()	No ()
All Bottles Sealed?	Yes <input checked="" type="checkbox"/> ()	No ()
Any Bottles Broken?	Yes ()	No <input checked="" type="checkbox"/> ()
Labels in good condition?	Yes <input checked="" type="checkbox"/> ()	No ()
Labels agree with chain of custody?	Yes <input checked="" type="checkbox"/> ()	No ()
Correct Containers Used?	Yes <input checked="" type="checkbox"/> ()	No ()
Preserved Properly?	Yes <input checked="" type="checkbox"/> ()	No ()
Sufficient Sample?	Yes <input checked="" type="checkbox"/> ()	No ()

Comments: _____

Job # F4975

Accutest Laboratories Southeast
Case Narrative

3) Metals Conformance / Non-conformance Summary

Blank level below reporting limits? MP2126, MP2127 Yes (✓) No ()

If no, list analytes above reporting limits: _____

Spike blank (LCS) data within acceptable Limits? MP2127, MP2126 Yes (✓) No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

Matrix spike data within acceptable limits? Yes () No (✓)

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: Pb
MS % rec 128.2 acceptance criteria 127%

Matrix duplicate data within acceptable limits? Yes (✓) No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

Samples prepared and analyzed within holding time? Yes (✓) No ()

If holding times were not met, list analytes where holding times were exceeded and explain: _____

All analytical criteria met (calibration, CCV, ICV, CCB, etc.)? Yes (✓) No ()

If not met, list effected samples and analytes: _____

Comments: _____

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4975
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1007M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/07/99
Run ID: MA1578

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	60	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	4.0	.33	anr							
Calcium	5000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	100	32	anr							
Lead	100	1.59	0.20	<100	1.8	<100B	1.4	<100		
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	100	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4975
Account: ITPAMONR IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1007M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/07/99
Run ID: MA1578

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	60	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	4.0	.33	anr							
Calcium	5000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	100	32	anr							
Lead	100	1.59	9.8	<500	13.0	<100B	5.3	<100B	6.7	<100B
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	100	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4975
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1007M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/07/99
Run ID: MA1578

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr					
Antimony	60	2.39	anr					
Arsenic	10	3.4	anr					
Barium	200	.39	anr					
Beryllium	5.0	.36	anr					
Cadmium	4.0	.33	anr					
Calcium	5000	19.5	anr					
Chromium	10	.627	anr					
Cobalt	50	.797	anr					
Copper	25	.747	anr					
Iron	100	32	anr					
Lead	100	1.59	6.8	<100B	14.6	<500	18.8	<500
Magnesium	5000	17.6	anr					
Manganese	15	.16	anr					
Molybdenum	50	.68	anr					
Nickel	40	1	anr					
Potassium	5000	28.2	anr					
Selenium	100	2	anr					
Silver	10	.96	anr					
Sodium	5000	153	anr					
Thallium	10	2.69	anr					
Tin	50	4.2	anr					
Vanadium	50	.717	anr					
Zinc	20	.83	anr					

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F4975
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2126
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 10/07/99

Metal	RDL	IDL	MB raw	final
Aluminum	20.0	3	anr	
Antimony	6.0	.24	anr	
Arsenic	1.0	.34	anr	
Barium	20.0	.04	anr	
Beryllium	0.50	.04	anr	
Cadmium	0.40	.03	anr	
Calcium	500	2	anr	
Chromium	1.0	.06	anr	
Cobalt	5.0	.08	anr	
Copper	2.5	.07	anr	
Iron	10.0	3.2	anr	
Lead	10.0	.16	6.9	<10.0
Magnesium	500	1.8	anr	
Manganese	1.5	.02	anr	
Molybdenum	5.0	.07	anr	
Nickel	4.0	.1	anr	
Potassium	500	2.8	anr	
Selenium	10.0	.2	anr	
Silver	1.0	.1	anr	
Sodium	500	15.3	anr	
Thallium	1.0	.27	anr	
Tin	5.0	.22	anr	
Vanadium	5.0	.07	anr	
Zinc	4.0	.08	anr	

Associated samples MP2126: F4975-1, F4975-2, F4975-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F4975
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2127
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 10/07/99

Metal	RDL	IDL	MB raw	final
Aluminum	20.0	3	anr	
Antimony	6.0	.24	anr	
Arsenic	1.0	.34	anr	
Barium	20.0	.04	anr	
Beryllium	0.50	.04	anr	
Cadmium	0.40	.03	anr	
Calcium	500	2	anr	
Chromium	1.0	.06	anr	
Cobalt	5.0	.08	anr	
Copper	2.5	.07	anr	
Iron	10.0	3.2	anr	
Lead	10.0	.16	0.57	<10.0
Magnesium	500	1.8	anr	
Manganese	1.5	.02	anr	
Molybdenum	5.0	.07	anr	
Nickel	4.0	.1	anr	
Potassium	500	2.8	anr	
Selenium	10.0	.2	anr	
Silver	1.0	.1	anr	
Sodium	500	15.3	anr	
Thallium	1.0	.27	anr	
Tin	5.0	.22	anr	
Vanadium	5.0	.07	anr	
Zinc	2.0	.08	anr	

Associated samples MP2127: F4975-4, F4975-5, F4975-6, F4975-7, F4975-8, F4975-9, F4975-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4975
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2126
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date: 10/07/99

10/07/99

Metal	F4951-10R Original	DUP	RPD	QC Limits	F4951-10R Original MS	Spikelot MPFLICP	* Rec	QC Limits
Aluminum	anr							
Antimony	anr							
Arsenic	anr							
Barium	anr							
Beryllium	anr							
Cadmium	anr							
Calcium	anr							
Chromium	anr							
Cobalt	anr							
Copper	anr							
Iron	anr							
Lead	67.6	74.1	9.1	0-44	67.6	213	113.34	128.2N 60-127
Magnesium	anr							
Manganese	anr							
Molybdenum	anr							
Nickel	anr							
Potassium	anr							
Selenium	anr							
Silver	anr							
Sodium	anr							
Thallium	anr							
Tin	anr							
Vanadium	anr							
Zinc	anr							

Associated samples MP2126: F4975-1, F4975-2, F4975-3

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

OVERVIEW

One (1) soil sample was analyzed for TAL Metals by EPA SW-846 Methods 6010/7471, and one (1) sample was analyzed for lead by EPA SW-846 Method 6010. No site-specific Quality Control samples were analyzed. Accutest, located in Orlando, FL, performed the analyses.

SUMMARY

These samples were analyzed successfully.

MAJOR PROBLEMS

No major problems with the validity of the analytical data were found.

MINOR PROBLEMS

- The initial and/or continuing calibration blanks contained the metals aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, potassium, silver, sodium, thallium, vanadium and zinc. Sample results with concentrations less than five (5) times the blank concentration are qualified as blank contaminated (B).
- TAL metal matrix spike and matrix spike duplicate samples had a low recovery of silver. Silver results will be qualified biased low (L or UL).
- The serial dilution sample had elevated recoveries of calcium, copper, lead, magnesium, potassium and zinc. The results for these analytes should be qualified estimated (J).

NOTES

- The low concentration check standard was recovered low for lead. However, the regular standard was recovered acceptably, so no data qualification is necessary.
- The method blank was analyzed successfully.
- The laboratory duplicate was successfully analyzed.
- The concentrations of aluminum and iron added to the TAL metals matrix spike and matrix spike duplicate was less than four (4) times the original standard concentration. The lead matrix spike and matrix spike duplicate spike concentrations were also less than four (4) times the original concentration.

REPORT CONTENT STATEMENT

These data were reviewed in accordance with USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses. The text of this report only addresses items that affect the validity of the data contained therein.

ATTACHMENT A

Glossary of Data Qualifiers

Glossary of Data Qualifier Codes

Codes Relating to Identification

(Confidence Concerning Presence or Absence of Compounds)

U = Not Detected. The associated number indicates the approximate sample concentration necessary to be detected.

(No Code) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm the presence or absence in future sampling efforts.

Codes Related to Quantitation

(Can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

Other Codes

Q = No analytical result.

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

ATTACHMENT B

Data Summary Forms

Data Summary Table

Site: FNTC - Bainbridge - Small Arms Ranges Confirmation Results

Lab: Accutest

Reviewer: Michael J. Lacy, Ph.D.

Date: 21 October 1999

Report Number: F4993

Sample I.D.	404-11C1	404-30C
Matrix	Soil	Soil
Units	mg/kg	mg/kg
Date Sampled	9/29/1999	9/25/1999
Time Sampled	1527	1118
% Moisture	5.2	6.5
pH	N/A	N/A
Dilution Factor	1.0	1.0
	Result	VQ
Lead	---	345

Aluminum	13800		---
Antimony	1.0	JB	---
Arsenic	4.7	B	---
Barium	33.5		---
Beryllium	0.33	JB	---
Cadmium	<0.03	U	---
Calcium	410	J	---
Chromium	19.0		---
Cobalt	2.0	JB	---
Copper	5.7	J	---
Iron	15000		---
Lead	16.9	JB	---
Magnesium	273	JB	---
Manganese	138		---
Mercury	0.02	J	---
Nickel	3.2	JB	---
Potassium	324	JB	---
Selenium	<0.20	U	---
Silver	<0.1	UL	---
Sodium	262	JB	---
Thallium	<0.27	U	---
Vanadium	28.5		---
Zinc	7.6	J	---

VQ - Validation Qualifier

ATTACHMENT C

Laboratory Reported Results



Report of Analysis

Page 1 of 1

Client Sample ID: 404-11C1

Lab Sample ID: F4993-2

Matrix: SO - Soil

Date Sampled: 09/29/99

Date Received: 10/01/99

Percent Solids: 94.8

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	13800	20.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Antimony	1.0 B	6.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Arsenic	4.7	1.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Barium	33.5	20.1	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Beryllium	0.33 B	0.50	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cadmium	0.03 U	0.40	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Calcium	410 B	502	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Chromium	19.0	1.0	µg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Cobalt	2.0 B	5.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Copper	5.7	2.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Iron	15000	10.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Lead	16.9	10.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Magnesium	273 B	502	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Manganese	138	1.5	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Mercury	0.02 B	0.17	mg/kg	1	10/05/99	10/05/99 SJL	SW846 7471A
Nickel	3.2 B	4.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Potassium	324 B	502	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Selenium	0.20 U	10.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Silver	0.1 U	1.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Sodium	262 B	502	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Thallium	0.27 U	1.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Vanadium	28.5	5.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A
Zinc	7.6	2.0	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

000004



Report of Analysis

Page 1 of 1

Client Sample ID: 404-30C

Lab Sample ID: F4993-3

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/25/99

Date Received: 10/01/99

Percent Solids: 93.5

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	345	10.9	mg/kg	1	10/07/99	10/07/99 JK	SW846 6010A

RDL = Reported Detection Limit

300005

ATTACHMENT D

Laboratory Reported Tentatively Identified Compounds

(Not Applicable)

ATTACHMENT E

Support Documentation



INTERNATIONAL
TECHNOLOGY
CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 93868
Page 1 of 1

Project Name/No. 1 Bunbury 798939 Samples Shipment Date 7 9/30/99 Bill to: 5 IT Corp
Sample Team Members 2 Treuter/Klinger Lab Destination 8 Accubest Lab
407-425-6700
Profit Center No. 3 --- Lab Contact 9 Linda Williams
410-378-3450
Project Manager 4 L. Stearns Project Contact/Phone 12 Dick Treuter Final Report to: 10 Dorothy Small
Larry Stearns
Purchase Order No. 6 798939-007 Carrier/Waybill No. 13 FedEx 792277099331 IT Corp
2790 Moss Side Blvd
Monroeville, PA 15146
Required Report Date 11 3 days

ONE CONTAINER PER LINE

Sample Number 14	Sample Description/Type 15	Date/Time Collected 16	Container Type 17	Sample Volume 18	Pre-servative 19	Requested Testing Program 20	Condition on Receipt 21	Disposal Record No. 22
409-76C	Comp 3pt Soil Bldg 409 Grid P3	9/25/99 1109	1-803	203	4°	Total Lead 6010	F49931	ms/USD
404-11C1	Comp 3pt Soil Bldg 404 Grid P5	9/29/99 1527				Total Lead 6010 TAL Metals	-2	
404-30C	Comp 3pt Soil Bldg 404 Grid P6	9/25/99 1118				Total Lead 6010	-3	
707-P5A	Comp 5pt Soil Bldg 707 Pile 5A	9/30/99 1305		803		TCLP Lead 1311/6010	-4	

Special Instructions: 23 E-mail results to Dorothy Small

Possible Hazard Identification: 24 Lead Sample Disposal: 25
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒ Return to Client ☐ Disposal by Lab ☒ Archive (mos.)

Turnaround Time Required: 26 3 days QC Level: 27
Normal ☐ Rush ☒ I. ☐ II. ☐ III. ☒ Project Specific (specify): Navy NFESC Level C

1. Relinquished by 28 <u>Dick Treuter</u> Date: <u>9/30/99</u> (Signature/Affiliation) <u>Dick Treuter / IT</u> Time: <u>1730</u>	1. Received by 28 <u>Abby Wilson</u> Date: <u>10/1/99</u> (Signature/Affiliation) <u>Abby Wilson</u> Time: <u>1500</u>
2. Relinquished by Date: _____ (Signature/Affiliation) Time: _____	2. Received by <u>Cooley 42</u> Date: _____ (Signature/Affiliation) Time: _____
3. Relinquished by Date: _____ (Signature/Affiliation) Time: _____	3. Received by Date: _____ (Signature/Affiliation) Time: _____

Comments: 29 Fax results to Dick Treuter
410-378-3232

White: To accompany samples

Yellow: Field copy

* See back of form for special instructions.

Accutest Laboratories Southeast
Case Narrative

Job (SDG) No.: F4993

Samples: 1-4

Analysis Performed: Metals

1) **Sample Receipt Conformance / Non-Conformance Summary**

Custody Seals on Coolers?	Yes <input checked="" type="checkbox"/> ()	No ()
Custody Seals in Tact?	Yes <input checked="" type="checkbox"/> ()	No ()
Chain of Custody Sealed in Plastic?	Yes <input checked="" type="checkbox"/> ()	No ()
Chain of Custody Filled out Properly?	Yes <input checked="" type="checkbox"/> ()	No ()
Enough ice and Packing material?	Yes <input checked="" type="checkbox"/> ()	No ()
All Bottles Sealed?	Yes <input checked="" type="checkbox"/> ()	No ()
Any Bottles Broken?	Yes ()	No <input checked="" type="checkbox"/> ()
Labels in good condition?	Yes <input checked="" type="checkbox"/> ()	No ()
Labels agree with chain of custody?	Yes <input checked="" type="checkbox"/> ()	No ()
Correct Containers Used?	Yes <input checked="" type="checkbox"/> ()	No ()
Preserved Properly?	Yes <input checked="" type="checkbox"/> ()	No ()
Sufficient Sample?	Yes <input checked="" type="checkbox"/> ()	No ()

Comments: _____

Accutest Laboratories Southeast Case Narrative

3) Metals Conformance / Non-conformance Summary

Blank level below reporting limits? MP2127 Yes (✓) No ()
MP2125

If no, list analytes above reporting limits: _____

Spike blank (LCS) data within acceptable Limits? Yes (✓) No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

MP2127, MP2125

Matrix spike data within acceptable limits? Yes () No (✓)

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

See page 39, 40 for A1, Fe out, see page 42, 43

Matrix duplicate data within acceptable limits? Yes () No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

SB out see page 37 for details

Samples prepared and analyzed within holding time? Yes (✓) No ()

If holding times were not met, list analytes where holding times were exceeded and explain: _____

All analytical criteria met (calibration, CCV, ICV, CCB, etc.)? Yes (✓) No ()

If not met, list affected samples and analytes: _____

Comments: MS 12up Railwire due to matrix.

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F4993
 Account: ITPAMONR IT Corporation
 Project: ITPAMONR1597 - Bainbridge

File ID: IR1007M1.ASC Date Analyzed: 10/07/99 Methods: SW846 6010A
 OC Limits: 70 to 130 % Recovery Run ID: MA1578 Units: ug/l

Metal	CRI True	CRIA True	CRIA Results	% Rec	CRI Results	% Rec
Aluminum	200					
Antimony		10	7.4B	74.0		
Arsenic		10	10.0	100.0		
Barium	200				206	103.1
Beryllium	5.0				5.7	114.8
Cadmium	5.0				5.3	106.8
Calcium	1000					
Chromium	10				10.6	106.2
Cobalt	50				50.7	101.4
Copper	25				24.2B	97.0
Iron	300					
Lead		10	7.6B	76.0		
Magnesium	5000					
Manganese	15				15.4	102.3
Molybdenum	50					
Nickel	40				42.6	106.6
Potassium	5000					
Selenium		10	10.9B	109.3		
Silver	10				10.3	103.2
Sodium	5000					
Thallium		10	12.0	119.9		
Tin	50					
Vanadium	50				49.9B	99.8
Zinc	20				23.5	117.4

(*) Outside of QC limits
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4993
Account: ITPAMONR IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1006M1.ASC
OC Limits: result < RDL

Date Analyzed: 10/06/99
Run ID: MA1576

Methods: SW945 6010A
Units: ug/l

Metal	RDL	IDL	ICB raw	final	ICB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30								
Antimony	5.0	2.39								
Arsenic	10	3.4								
Barium	200	.39								
Beryllium	5.0	.36								
Cadmium	5.0	.33								
Calcium	1000	19.5								
Chromium	10	.637								
Cobalt	50	.797								
Copper	25	.747								
Iron	300	32								
Lead	5.0	1.59			1.9	<5.0B	2.7	<5.0B	3.9	<5.0B
Magnesium	5000	17.6								
Manganese	15	.16								
Molybdenum	50	.68								
Nickel	40	1								
Potassium	5000	28.2								
Selenium	10	2								
Silver	10	.96								
Sodium	5000	153								
Thallium	10	2.69								
Tin	50	2.2								
Vanadium	50	.717								
Zinc	20	.83								

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4993
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1006M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/06/99
Run ID: MA1576

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	anr							
Calcium	1000	19.5	anr							
Chromium	10	.63	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	1.8	<5.0B	1.9	<5.0B			2.9	<5.0
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.93	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4993
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1006M1.ASC Date Analyzed: 10/06/99 Methods: SW846 6010A
QC Limits: result < RDL Run ID: MA1576 Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final
Aluminum	200	30	anr			
Antimony	5.0	2.39	anr			
Arsenic	10	3.4	anr			
Barium	200	.39	anr			
Beryllium	5.0	.36	anr			
Cadmium	5.0	.33	anr			
Calcium	1000	19.5	anr			
Chromium	10	.637	anr			
Cobalt	50	.797	anr			
Copper	25	.747	anr			
Iron	300	32	anr			
Lead	5.0	1.59	5.9	<15	3.8	<5.0B
Magnesium	5000	17.6	anr			
Manganese	15	.16	anr			
Molybdenum	50	.68	anr			
Nickel	40	1	anr			
Potassium	5000	28.2	anr			
Selenium	10	2	anr			
Silver	10	.96	anr			
Sodium	5000	153	anr			
Thallium	10	2.69	anr			
Tin	50	2.2	anr			
Vanadium	50	.717	anr			
Zinc	20	.83	anr			

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4993
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1007M1.ASC Date Analyzed: 10/07/99 Methods: SW846 6010A
QC Limits: result < RDL Run ID: MA1578 Units: ug/l

Metal	RDL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	18.0	<200	37.6	<200B	66.9	<200B		
Antimony	60	2.39	5.1	<60.0B	3.6	<60.0B	6.9	<60.0B		
Arsenic	10	3.4	-1.3	<10.0	-0.30	<10.0	3.5	<10.0B		
Barium	200	.39	0.90	<200B	1.0	<200B	0.80	<200B		
Beryllium	5.0	.36	1.3	<5.0B	1.4	<5.0B	1.6	<5.0B		
Cadmium	4.0	.33	0.90	<4.0B	1.1	<4.0B	0.90	<4.0B		
Calcium	5000	19.5	15.5	<5000	18.3	<5000	59.9	<5000B		
Chromium	10	.637	0.80	<10.0B	1.2	<10.0B	1.0	<10.0B		
Cobalt	50	.797	0.90	<50.0B	0.90	<50.0B	0.80	<50.0B		
Copper	25	.747	-0.30	<25.0	-0.20	<25.0	-0.70	<25.0		
Iron	100	32	14.3	<100	21.1	<100	36.0	<100B		
Lead	100	1.59	0.20	<100	1.8	<100B	1.4	<100		
Magnesium	5000	17.6	16.5	<5000	19.0	<5000B	61.6	<5000B		
Manganese	15	.16	0.80	<15.0B	1.0	<15.0B	0.80	<15.0B		
Molybdenum	50	.68	anr							
Nickel	40	1	0.80	<40.0	0.30	<40.0	0.80	<40.0		
Potassium	5000	28.2	1.9	<5000	30.9	<5000B	16.3	<5000		
Selenium	100	2	1.1	<100	0.20	<100	0.70	<100		
Silver	10	.96	1.0	<10.0B	0.50	<10.0	1.4	<10.0B		
Sodium	5000	153	-35.8	<5000	-105	<5000	-78.3	<5000		
Thallium	10	2.69	7.1	<10.0B	4.4	<10.0B	4.7	<10.0B		
Tin	50	2.2	anr							
Vanadium	50	.717	1.6	<50.0B	1.2	<50.0B	1.1	<50.0B		
Zinc	20	.82	0.50	<20.0	1.1	<20.0B	0.40	<20.0		

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4993
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1007M1.ASC Date Analyzed: 10/07/99 Methods: SW846 6010A
QC Limits: result < RDL Run ID: MA1578 Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	13.1	<200	56.7	<200B	66.6	<200B	52.6	<200B
Antimony	60	2.39	4.7	<200	4.4	<60.0B	5.2	<60.0B	3.7	<60.0B
Arsenic	10	3.4	0.10	<500	1.3	<10.0	0.60	<10.0	-0.70	<10.0
Barium	200	.39	0.040	<1000	1.3	<200B	1.2	<200B	1.1	<200B
Beryllium	5.0	.36	1.1	<5.0	2.2	<5.0B	2.3	<5.0B	2.4	<5.0B
Cadmium	4.0	.33	0.0	<50	0.80	<4.0B	0.80	<4.0B	1.1	<4.0B
Calcium	5000	19.5	-1.7	<5000	15.8	<5000	18.2	<5000	24.7	<5000B
Chromium	10	.637	0.050	<50	1.4	<10.0B	1.3	<10.0B	1.3	<10.0B
Cobalt	50	.797	0.0	<50	1.0	<50.0B	0.80	<50.0B	0.70	<50.0
Copper	25	.747	-2.3	<25	-1.7	<25.0B	-1.7	<25.0B	-2.4	<25.0B
Iron	100	32	0.89	<100	32.2	<100B	61.8	<100B	41.2	<100B
Lead	100	1.59	9.8	<500	13.0	<100B	5.3	<100B	6.7	<100B
Magnesium	5000	17.6	0.89	<5000	19.4	<5000B	24.2	<5000B	21.3	<5000B
Manganese	15	.16	0.13	<15	1.2	<15.0B	1.9	<15.0B	1.8	<15.0B
Molybdenum	50	.68	anr							
Nickel	40	1	-0.43	<40	0.90	<40.0	2.5	<40.0B	2.4	<40.0B
Potassium	5000	28.2	-11	<5000	10.0	<5000	18.5	<5000	8.3	<5000
Selenium	100	2	1.0	<500	2.4	<100B	0.60	<100	1.2	<100
Silver	10	.96	0.98	<50	2.1	<10.0B	1.0	<10.0B	0.40	<10.0
Sodium	5000	153	-250	<5000	-154	<5000B	-0.50	<5000	-100	<5000
Thallium	10	2.69	3.2	<500	7.2	<10.0B	7.8	<10.0B	4.7	<10.0B
Tin	50	2.2	anr							
Vanadium	50	.717	0.37	<50	1.6	<50.0B	1.8	<50.0B	1.6	<50.0B
Zinc	20	.83	-0.75	<20	0.30	<20.0	0.20	<20.0	0.40	<20.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4993
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1007M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/07/99
Run ID: MA1578

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	43.6	<200D	44.5	<200	36.1	<200
Antimony	60	2.39	6.2	<60.0B	5.5	<200	2.8	<200
Arsenic	10	3.4	0.80	<10.0	0.98	<500	-0.80	<500
Barium	200	.39	1.4	<200B	0.72	<1000	0.38	<1000
Beryllium	5.0	.36	2.3	<5.0B	2.0	<5.0	1.7	<5.0
Cadmium	4.0	.33	1.0	<4.0B	0.57	<50	0.36	<50
Calcium	5000	19.5	60.6	<5000B	14.7	<5000	6.3	<5000
Chromium	10	.637	1.6	<10.0B	0.91	<50	0.43	<50
Cobalt	50	.797	1.2	<50.0B	0.60	<50	0.20	<50
Copper	25	.747	-1.2	<25.0B	-2.0	<25	-2.1	<25
Iron	100	32	30.4	<100	12.5	<100	-0.10	<100
Lead	100	1.59	6.8	<100B	14.6	<500	18.8	<500
Magnesium	5000	17.6	24.1	<5000B	14.4	<5000	7.3	<5000
Manganese	15	.16	1.5	<15.0B	0.79	<15	0.44	<15
Molybdenum	50	.68	anr					
Nickel	40	1	2.1	<40.0B	-0.090	<40	-0.020	<40
Potassium	5000	28.2	85.1	<5000B	51.0	<5000	38.1	<5000
Selenium	100	2	1.8	<100	-0.52	<500	-0.21	<500
Silver	10	.96	1.7	<10.0B	1.8	<50	1.5	<50
Sodium	5000	153	105	<5000	221	<5000	68.7	<5000
Thallium	10	2.69	8.7	<10.0B	7.4	<500	4.2	<500
Tin	50	2.2	anr					
Vanadium	50	.717	1.6	<50.0B	1.1	<50	0.49	<50
Zinc	20	.83	0.50	<20.0	0.020	<20	-0.35	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F4993
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2127
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 10/07/99

Metal	RDL	IDL	MB Law	Final
Aluminum	20.0	3	3.7	<20.0
Antimony	6.0	.24	-0.02	<6.0
Arsenic	1.0	.34	0.09	<1.0
Barium	20.0	.04	0.07	<20.0
Beryllium	0.50	.04	0.14	<0.50
Cadmium	0.40	.03	0.02	<0.40
Calcium	500	2	0.66	<500
Chromium	1.0	.06	0.08	<1.0
Cobalt	5.0	.08	0.02	<5.0
Copper	2.5	.07	-0.28	<2.5
Iron	10.0	3.2	2.3	<10.0
Lead	10.0	.16	0.57	<10.0
Magnesium	500	1.8	0.63	<500
Manganese	1.5	.02	0.04	<1.5
Molybdenum	5.0	.07	anr	
Nickel	4.0	.1	-0.02	<4.0
Potassium	500	2.8	0.98	<500
Selenium	10.0	.2	-0.19	<10.0
Silver	1.0	.1	0.12	<1.0
Sodium	500	15.3	-13.8	<500
Thallium	1.0	.27	0.18	<1.0
Tin	5.0	.22	anr	
Vanadium	5.0	.07	0.08	<5.0
Zinc	2.0	.08	1.2	<2.0

Associated samples MP2127: F4993-1, F4993-2, F4993-3

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F4993
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2107
Matrix Type: AQUEOUS

Methods: SW846 6010A
Units: mg/l

Prep Date: 09/29/99 09/29/99 09/29/99

Metal	RDL	IDL	MB raw	final	MB raw	final	MB raw	final
Aluminum	0.20	.03	anr					
Antimony	0.0050	.00239	anr					
Arsenic	0.010	.00345	anr					
Barium	0.20	.00039	anr					
Beryllium	0.0050	.000363	anr					
Cadmium	0.0050	.00033	anr					
Calcium	1.0	.0195	anr					
Chromium	0.010	.000637	anr					
Cobalt	0.050	.000797	anr					
Copper	0.025	.000747						
Iron	0.10	.032	anr					
Lead	0.0050	.00159	0.0037	<0.0050	0.015	<0.015	0.0064	<0.50
Magnesium	5.0	.0176	anr					
Manganese	0.015	.00016	anr					
Molybdenum	0.050	.00068	anr					
Nickel	0.040	.001	anr					
Potassium	5.0	.0282	anr					
Selenium	0.010	.00204	anr					
Silver	0.010	.000963	anr					
Sodium	5.0	.153	anr					
Thallium	0.010	.00269	anr					
Tin	0.050	.00223	anr					
Vanadium	0.050	.000717	anr					
Zinc	0.020	.00083						

Associated samples MP2107: F4993-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4993
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2127
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date:

10/07/99

10/07/99

Metal	F4993-2 Original	DUP	RPD	QC Limits	F4993-2 Original MS	Spikelot MPFLICP	% Rec	QC Limits
Aluminum	13800	15200	9.5	0-20	13800	25900	3121.5	387.2(b) 80-120
Antimony	1.0	1.4	31.4 (a)	0-20	1.0	84.8	107.64	77.9N 80-120
Arsenic	4.7	5.6	17.2	0-28	4.7	364	430.55	83.5 72-110
Barium	33.5	37.1	10.1	0-14	33.5	441	430.55	94.6 64-116
Beryllium	0.33	0.37	12.1	0-20	0.33	10.2	10.76	92.0 80-120
Cadmium	0.0	0.0	NC	0-16	0.0	9.4	10.76	87.7 64-120
Calcium	410	453	10.0	0-20	410	3000	2690.95	96.1 80-120
Chromium	19.0	21.0	9.9	0-33	19.0	62.4	43.06	100.8 66-119
Cobalt	2.0	2.2	11.9	0-20	2.0	96.9	107.64	88.2 80-120
Copper	5.7	6.3	9.6	0-39	5.7	56.1	53.82	93.7 65-124
Iron	15000	16500	9.8	0-20	15000	19300	2906.23	149.4(b) 80-120
Lead	16.9	18.7	10.0	0-44	16.9	123	107.64	98.9 60-127
Magnesium	273	303	10.3	0-20	273	2800	2690.95	93.9 80-120
Manganese	138	152	9.8	0-20	138	251	107.64	104.9 80-120
Molybdenum	anr							
Nickel	3.2	3.5	10.8	0-30	3.2	103	107.64	92.5 71-119
Potassium	324	355	9.1	0-20	324	2870	2690.95	94.7 80-120
Selenium	0.0	0.0	NC	0-28	0.0	379	430.55	87.9 65-115
Silver	0.0	0.0	NC	0-21	0.0	7.9	10.76	73.8 63-123
Sodium	262	301	13.7	0-20	262	2500	2690.95	83.3 80-120
Thallium	0.0	0.0	NC	0-20	0.0	398	430.55	92.4 80-120
Tin	anr							
Vanadium	28.5	31.5	10.1	0-20	28.5	128	107.64	92.5 80-120
Zinc	7.6	8.6	12.7	0-31	7.6	105	107.64	90.7 69-120

Associated samples MP2127: F4993-1, F4993-2, F4993-3

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) RPD acceptable due to low duplicate and sample concentrations.

(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4993
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2127
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date: 10/07/99

Metal	F4993-2 Original	MSD	Spikelet MPFLICP	% Rec	QC Limits
Aluminum	13800	24700	2941.42	367.8(a)	80-120
Antimony	1.0	60.7	101.43	78.6N	80-120
Arsenic	4.7	346	405.71	84.1	72-110
Barium	33.5	419	405.71	95.0	64-116
Beryllium	0.33	9.7	10.14	92.7	80-120
Cadmium	0.0	9.0	10.14	88.8	64-120
Calcium	410	2850	2535.7	96.3	80-120
Chromium	19.0	59.3	40.57	99.3	66-119
Cobalt	2.0	92.2	101.43	88.9	60-120
Copper	5.7	53.3	50.71	93.9	65-124
Iron	15000	18400	2738.56	123.8(a)	80-120
Lead	16.9	117	101.43	99.1	60-127
Magnesium	273	2670	2535.7	94.4	80-120
Manganese	138	239	101.43	99.1	80-120
Molybdenum					
Nickel	3.2	97.9	101.43	93.5	71-119
Potassium	324	2730	2535.7	95.0	80-120
Selenium	0.0	361	405.71	88.9	65-115
Silver	0.0	7.6	10.14	74.6	63-123
Sodium	262	2370	2535.7	83.0	80-120
Thallium	0.0	379	405.71	93.4	80-120
Tin					
Vanadium	28.5	122	101.43	91.9	80-120
Zinc	7.6	100	101.43	91.3	69-120

Associated samples MP2127: F4993-1, F4993-2, F4993-3

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4993
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2107
 Matrix Type: AQUEOUS

Methods: SW846 6010A
 Units: mg/l

Prep Date: 09/29/99 09/29/99

Metal	F4959-1 Original DUP	RPD	QC Limits	F4959-1 Original MS	Spikelot MPFLICP	* Rec	QC Limits
Aluminum	anr						
Antimony	anr						
Arsenic	anr						
Barium	anr						
Beryllium	anr						
Cadmium	anr						
Calcium	anr						
Chromium	anr						
Cobalt	anr						
Copper	anr						
Iron	anr						
Lead	64.2	65.3	1.7	0-44	64.2	63.0	1.00 -120.0(a 60-127
Magnesium	anr						
Manganese	anr						
Molybdenum	anr						
Nickel	anr						
Potassium	anr						
Selenium	anr						
Silver	anr						
Sodium	anr						
Thallium	anr						
Tin	anr						
Vanadium	anr						
Zinc	anr						

Associated samples MP2107: F4993-4

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F4993
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2107
 Matrix Type: AQUEOUS

Methods: SW846 6010A
 Units: mg/l

Prep Date: 09/29/99

Metal	F4959-1 Original MSD	Spikelot MPFLICP	* Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	64.2	62.4	1.00	-180.0(a) 60-127
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Thallium	anr			
Tin				
Vanadium	anr			
Zinc	anr			

Associated samples MP2107: F4993-4

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SERIAL DILUTION RESULTS SUMMARY

Login Number: F4993
 Account: ITPAMONR IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2127
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: ug/l

Prep Date: 10/07/99

Metal	F4993-2 Original	SDL 1:5	RPD	QC Limits
Aluminum	138000	149000	8.4	0-10
Antimony	9.95	18.8	88.5 (a)	0-10
Arsenic	46.8	57.2	22.4 (a)	0-10
Barium	333	366	10.0	0-10
Beryllium	3.28	9.62	193.3 (a)	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	4080	4660	14.4	0-10
Chromium	189	203	7.5	0-10
Cobalt	19.9	35.4	77.9 (a)	0-10
Copper	56.7	76.4	34.7	0-10
Iron	149000	159000	6.9	0-10
Lead	168	201	19.5	0-10
Magnesium	2720	3030	11.2	0-10
Manganese	1380	1470	7.0	0-10
Molybdenum	anr			
Nickel	31.4	36.9	17.5 (a)	0-10
Potassium	3220	3590	11.3	0-10
Selenium	0.00	17.5		0-10
Silver	0.00	0.00	NC	0-10
Sodium	2610	1420	45.5 (a)	0-10
Thallium	0.00	14.9		0-10
Tin	anr			
Vanadium	284	306	7.8	0-10
Zinc	75.3	152	101.2	0-10

Associated samples MP2127: F4993-1, F4993-2, F4993-3

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4993
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: HG1005S1.HGD Date Analyzed: 10/05/99 Methods: SW846 7471A
QC Limits: result < RDL Run ID: MA1575 Units: ug/l

Metal	RDL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Mercury	1.0	.06	-0.068	<1.0	0.0048	<1.0	0	<1.0	0	<1.0

(*) Outside of QC limits
(anz) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F4993
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: HG1005S1.HGD
QC Limits: result < RDL

Date Analyzed: 10/05/99
Run ID: MA1575

Methods: SW846 7471A
Units: ug/l

Metal	RDL	IDL	CCB		CCB	
			raw	final	raw	final
Mercury	1.0	.06	-0.044	<1.0	-0.068	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

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OVERVIEW

Three (3) soil samples were analyzed for TAL Metals by EPA SW-846 Methods 6010/7471, and two (2) samples were analyzed for lead by EPA SW-846 Method 6010. No site-specific Quality Control samples were analyzed. Accutest, located in Orlando, FL, performed the analyses.

SUMMARY

These samples were analyzed successfully.

MAJOR PROBLEMS

- Matrix spike and matrix spike duplicate samples had recoveries less than 30 percent for calcium, potassium and sodium. Any samples with these analytes not detected are required to have those results qualified unusable (R).

MINOR PROBLEMS

- The initial and/or continuing calibration blanks contained the metals aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, lead, magnesium, manganese, nickel, potassium, selenium, thallium, vanadium and zinc. Sample results with concentrations less than five (5) times the blank concentration are qualified as blank contaminated (B).
- Matrix spike and matrix spike duplicate samples had out of control recoveries of antimony, magnesium, manganese and silver. All were recovered low except manganese. Positive manganese results will be qualified biased high (K), while antimony, magnesium and silver will have all results qualified biased low (L or UL). Positive calcium, potassium and sodium results should be qualified biased low (L).

NOTES

There are no notes associated with this validation report.

REPORT CONTENT STATEMENT

These data were reviewed in accordance with USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses. The text of this report only addresses items that affect the validity of the data contained therein.

ATTACHMENT A

Glossary of Data Qualifiers

Glossary of Data Qualifier Codes

Codes Relating to Identification

(Confidence Concerning Presence or Absence of Compounds)

U = Not Detected. The associated number indicates the approximate sample concentration necessary to be detected.

(No Code) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm the presence or absence in future sampling efforts.

Codes Related to Quantitation

(Can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

Other Codes

Q = No analytical result.

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

ATTACHMENT B

Data Summary Forms

Data Summary Table

1 of 1

Site: FNTC - Bainbridge - Small Arms Ranges Confirmation Results

Lab: Accutest

Reviewer: Michael J. Lacy, Ph.D.

Date: 21 October 1999

Report Number: F5006

Sample I.D.	404-197C		404-101C1		404-183C1		404-92C2		404-198C	
Matrix	Soil		Soil		Soil		Soil		Soil	
Units	mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Date Sampled	9/25/1999		9/29/1999		9/29/1999		10/2/1999		9/30/1999	
Time Sampled	1154		1518		1557		1406		1009	
% Moisture	7.3		7.3		6.8		10.9		14.7	
pH	N/A		N/A		N/A		N/A		N/A	
Dilution Factor	1.0		1.0		1.0		1.0		1.0	
	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ
Lead	---		---		247		---		286	

Aluminum	14400		16700		---		16700		---	
Antimony	0.97	JBL	0.85	JBL	---		14	JBL	---	
Arsenic	3.7		4.6		---		31		---	
Barium	52.0		25.0		---		34.9		---	
Beryllium	0.61	B	0.29	JB	---		0.77	B	---	
Cadmium	<0.04	U	<0.03	U	---		<0.04	U	---	
Calcium	710	JL	432	JL	---		792	JL	---	
Chromium	15.3		19.9		---		14.3		---	
Cobalt	7.0		1.7	JB	---		58	JB	---	
Copper	6.1		5.9		---		67		---	
Iron	13000		15800		---		14200		---	
Lead	70.5		14.0	B	---		124		---	
Magnesium	792	L	357	JL	---		911	L	---	
Manganese	301	K	64.6	K	---		121	K	---	
Mercury	0.05	J	0.02	J	---		0.04	J	---	
Nickel	6.6	B	4.4	B	---		7.8	B	---	
Potassium	567	JL	396	JL	---		978	JL	---	
Selenium	<0.22	U	<0.21	U	---		<0.24	U	---	
Silver	<0.11	UL	<0.1	UL	---		<0.11	UL	---	
Sodium	290	JBL	303	JBL	---		263	JBL	---	
Thallium	<0.28	U	<0.28	U	---		<0.32	U	---	
Vanadium	24.5		28.3		---		23.1		---	
Zinc	23.2		9.7		---		24.3		---	

VQ - Validation Qualifier

ATTACHMENT C

Laboratory Reported Results

**ACCUTEST.****Report of Analysis**

Page 1 of 1

Client Sample ID: 404-197C

Lab Sample ID: F5006-4

Matrix: SO - Soil

Date Sampled: 09/25/99

Date Received: 10/05/99

Percent Solids: 90.4

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	14400	21.9	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Antimony	0.97 B	6.6	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Arsenic	3.7	1.1	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Barium	52.0	21.9	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Beryllium	0.61	0.55	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Cadmium	0.04 U	0.44	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Calcium	710	548	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Chromium	15.3	1.1	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Cobalt	7.0	5.5	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Copper	6.1	2.7	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Iron	13000	11.0	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Lead	70.5	11.0	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Magnesium	792	548	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Manganese	301	1.6	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Mercury	0.05 B	0.14	mg/kg	1	10/07/99	10/08/99 SIL	SW846 7471A
Nickel	6.6	4.4	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Potassium	567	548	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Selenium	0.22 U	11.0	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Silver	0.11 U	1.1	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Sodium	290 B	548	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Thallium	0.29 U	1.1	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Vanadium	24.5	5.5	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Zinc	23.2	2.2	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A

RDL = Reported Detection Limit

606006



Report of Analysis

Page 1 of 1

Client Sample ID: 404-101C1
Lab Sample ID: F5006-5
Matrix: SO - Soil

Date Sampled: 09/29/99
Date Received: 10/05/99
Percent Solids: 92.7

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	16700	20.7	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Antimony	0.85 B	6.2	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Arsenic	4.6	1.0	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Barium	25.0	20.7	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Beryllium	0.29 B	0.52	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Cadmium	0.03 U	0.41	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Calcium	432 B	519	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Chromium	19.9	1.0	ug/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Cobalt	1.7 B	5.2	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Copper	5.9	2.6	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Iron	15800	10.4	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Lead	14.0	10.4	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Magnesium	357 B	519	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Manganese	64.6	1.6	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Mercury	0.02 B	0.19	mg/kg	1	10/07/99	10/08/99 SJL	SW846 7471A
Nickel	4.4	4.1	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Potassium	396 B	519	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Selenium	0.21 U	10.4	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Silver	0.1 U	1.0	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Sodium	303 B	519	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Thallium	0.28 U	1.0	ug/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Vanadium	28.3	5.2	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Zinc	9.7	2.1	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A

RDL = Reported Detection Limit

000007



Report of Analysis

Page 1 of 1

Client Sample ID: 404-183C1

Lab Sample ID: F5006-6

Matrix: SO - Soil

Date Sampled: 09/29/99

Date Received: 10/05/99

Percent Solids: 93.2

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	247	10.7	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A

RDL = Reported Detection Limit

000008



Report of Analysis

Page 1 of 1

Client Sample ID: 404-92C2

Lab Sample ID: F5006-7

Matrix: SO - Soil

Date Sampled: 10/02/99

Date Received: 10/05/99

Percent Solids: 89.1

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	16700	23.6	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Antimony	1.4 B	7.1	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Arsenic	3.1	1.2	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Barium	34.9	23.6	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Beryllium	0.77	0.59	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Cadmium	0.04 U	0.47	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Calcium	792	591	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Chromium	14.3	1.2	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Cobalt	5.8 B	5.9	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Copper	6.7	3.0	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Iron	14200	11.8	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Lead	124	11.8	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Magnesium	911	591	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Manganese	121	1.8	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Mercury	0.04 B	0.16	mg/kg	1	10/07/99	10/08/99 SJL	SW846 7471A
Nickel	7.8	4.7	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Potassium	978	591	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Selenium	0.24 U	11.8	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Silver	0.11 U	1.2	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Sodium	263 B	591	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Thallium	0.32 U	1.2	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Vanadium	23.1	5.9	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A
Zinc	24.3	2.4	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A

RDL = Reported Detection Limit

000000



ACCUTEST

Report of Analysis

Page 1 of 1

Client Sample ID: 404-198C

Lab Sample ID: F5006-8

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 09/30/99

Date Received: 10/05/99

Percent Solids: 92.4

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	286	10.1	mg/kg	1	10/07/99	10/12/99 JK	SW846 6010A

RDL = Reported Detection Limit

000010

ATTACHMENT D

Laboratory Reported Tentatively Identified Compounds

(Not Applicable)

ATTACHMENT E

Support Documentation



INTERNATIONAL
TECHNOLOGY
CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document
Page 1 of 2

Project: Name/No. ¹ Bainbridge 742439 Samples Shipment Date ⁷ 10/4/99
Sample Team Members ² Treuter/Klinger Lab Destination ⁸ Accutest Lab
Profit Center No. ³ Lab Contact ⁹ Linda Williams
Project Manager ⁴ L. Stearns Project Contact/Phone ¹² Dick Treuter
Purchase Order No. ⁶ 742439-007 Carrier/Waybill No. ¹³ FedEx 792277581920
Required Report Date ¹¹ 3 days

Bill to: ⁵ IT Corp
2790 Moss Side Blvd
Monroeville, PA 15146
Dorothy Small
Larry Stearns
IT Corp
2790 Moss Side Blvd
Monroeville, PA 15146

100000

ONE CONTAINER PER LINE

100-
21
-2
-3
-4
-5
-6
-7
-8

Sample Number ¹⁴	Sample Description/Type ¹⁵	Date/Time Collected ¹⁶	Container Type ¹⁷	Sample Volume ¹⁸	Pre-servative ¹⁹	Requested Testing Program ²⁰	Condition on Receipt ²¹	Disposal Record No. ²²
404-PIB	Comp 5pt Soil Bldg 404 Pile 1B	10/1/99 1745	1-Eoz	Eoz	4°C	TCLP Lead 1311/6010		MS/MSD
204-PIIA	Comp 5pt Soil Bldg 204 Pile 11A	10/2/99 1120						
404-PIOA	Comp 5pt Soil Bldg 404 Pile 10A	10/2/99 1210						
404-197C	Comp 3pt Soil Bldg 409 Grid P9	9/25/99 1154	1-4oz	303		Total Lead 6010 TAL Metals		MS/MSD
404-101C1	Comp 3pt Soil Bldg 404 Grid P2	9/24/99 1518	1-6oz	~9oz		Total Lead 6010 TAL Metals		
404-183C1	Comp 3pt Soil Bldg 404 Grid P11	9/24/99 1557		~2oz		Total Lead 6010		
404-92C2	Comp 3pt Soil Bldg 404 Grid P1	10/2/99 1406		~2oz		Total Lead 6010 TAL Metals		
404-198C	Comp 3pt Soil Bldg 404 Grid P10	9/30/99 1009		~2oz		Total Lead 6010		

Special Instructions: ²³ E-mail results to Dorothy Small

Possible Hazard Identification: ²⁴ Lead

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: ²⁵

Return to Client ☐ Disposal by Lab ☒ Archive (mos.)

Turnaround Time Required: ²⁶

Normal ☐ Rush ☒ 3 days

QC Level: ²⁷

I. ☐ II. ☐ III. ☒ Project Specific (specify): Naval AFESC Level C

1. Relinquished by ²⁸ Dick Treuter
(Signature/Affiliation) Dick Treuter

Date: 10/4/99
Time: 1730

1. Received by ²⁸ Rachid AitMouh
(Signature/Affiliation)

Date: 10/9/99
Time: 1610

2. Relinquished by
(Signature/Affiliation)

Date:
Time:

2. Received by
(Signature/Affiliation)

Date:
Time:

3. Relinquished by
(Signature/Affiliation)

Date:
Time:

3. Received by
(Signature/Affiliation)

Date:
Time:

Comments: ²⁹

Dick Treuter
For results to 410-378-3232

Accutest Laboratories Southeast
Case Narrative

Job (SDG) No.: F50006

Samples: Metals

Analysis Performed: 1-12

1) Sample Receipt Conformance / Non-Conformance Summary

Custody Seals on Coolers? Yes ☒ No ()

Custody Seals in Tact? Yes ☒ No ()

Chain of Custody Sealed in Plastic? Yes ☒ No ()

Chain of Custody Filled out Properly? Yes ☒ No ()

Enough ice and Packing material? Yes ☒ No ()

All Bottles Sealed? Yes ☒ No ()

Any Bottles Broken? Yes () No ☒

Labels in good condition? Yes ☒ No ()

Labels agree with chain of custody? Yes ☒ No ()

Correct Containers Used? Yes ☒ No ()

Preserved Properly? Yes ☒ No ()

Sufficient Sample? Yes ☒ No ()

Comments: _____

000017

Job # F5006

Accutest Laboratories Southeast
Case Narrative

3) **Metals Conformance / Non-conformance Summary**

Blank level below reporting limits? MP2132, MP2130, MP2133 Yes (✓) No ()

If no, list analytes above reporting limits: _____

Spike blank (LCS) data within acceptable Limits? MP2132, MP2130, MP2133 Yes (✓) No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

Matrix spike data within acceptable limits? Yes () No (✓)

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: Al, Se, Ca, E, Mn, Mg, K, Ag, Na
See pages 54-5B for details

Matrix duplicate data within acceptable limits? Yes () No (✓)

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: Se

Samples prepared and analyzed within holding time? Yes (✓) No ()

If holding times were not met, list analytes where holding times were exceeded and explain: _____

All analytical criteria met (calibration, CCV, ICV, CCB, etc.)? Yes (✓) No ()

If not met, list effected samples and analytes: _____

Comments: _____

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: P5006
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1008M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/08/99
Run ID: MA1563

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	60	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	4.0	.33	anr							
Calcium	5000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	100	32	anr							
Lead	100	1.59	-4.0	<100B	-4.9	<100B	-6.0	<100B	-1.8	<100B
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	100	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F5006
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1008M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/08/99
Run ID: MA1583

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	60	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	4.0	.33	anr							
Calcium	5000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	100	32	anr							
Lead	100	1.59	-4.3	<100B	-5.0	<100B	-4.9	<100B	-5.6	<100B
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	100	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F5006
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1008M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/08/99 Methods: SW846 6010A
Run ID: MA1583 Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final
Aluminum	200	30	anr			
Antimony	60	2.39	anr			
Arsenic	10	3.4	anr			
Barium	200	.39	anr			
Beryllium	5.0	.36	anr			
Cadmium	4.0	.33	anr			
Calcium	5000	19.5	anr			
Chromium	10	.637	anr			
Cobalt	50	.797	anr			
Copper	25	.747	anr			
Iron	100	32	anr			
Lead	100	1.59	~4.4	<500	-5.5	<100B
Magnesium	5000	17.6	anr			
Manganese	15	.16	anr			
Molybdenum	50	.68	anr			
Nickel	40	1	anr			
Potassium	5000	28.2	anr			
Selenium	100	2	anr			
Silver	10	.96	anr			
Sodium	5000	153	anr			
Thallium	10	2.69	anr			
Tin	50	2.2	anr			
Vanadium	50	.717	anr			
Zinc	20	.03	anr			

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F5006
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1012M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/12/99
Run ID: MA1599

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	23.4	<200	23.7	<200	29.4	<200	56.1	<200B
Antimony	60	2.39	4.7	<60.0B	1.9	<60.0	3.4	<60.0B	5.3	<60.0B
Arsenic	10	3.4	0.20	<10.0	0.10	<10.0	-1.9	<10.0	0.80	<10.0
Barium	200	.39	1.0	<200B	1.9	<200B	1.7	<200B	1.2	<200B
Beryllium	5.0	.36	1.4	<5.0B	1.5	<5.0B	1.2	<5.0B	1.7	<5.0B
Cadmium	4.0	.33	1.4	<4.0B	1.4	<4.0B	1.0	<4.0B	1.1	<4.0B
Calcium	5000	19.5	19.0	<5000	21.1	<5000B	25.0	<5000B	17.7	<5000
Chromium	10	.637	0.90	<10.0B	1.0	<10.0B	0.70	<10.0B	1.0	<10.0B
Cobalt	50	.797	0.80	<50.0B	1.0	<50.0B	0.30	<50.0	1.2	<50.0B
Copper	25	.747	0.1	<25.0	-0.30	<25.0	-0.50	<25.0	-0.50	<25.0
Iron	100	32	17.4	<100	18.6	<100	15.9	<100	44.2	<100B
Lead	100	1.59	2.2	<100B	3.3	<100B	2.6	<100B	2.7	<100B
Magnesium	5000	17.6	20.9	<5000B	21.3	<5000B	27.1	<5000B	22.1	<5000B
Manganese	15	.16	1.0	<15.0B	1.1	<15.0B	0.70	<15.0B	1.2	<15.0B
Molybdenum	50	.68	anr							
Nickel	40	1	1.3	<40.0B	2.0	<40.0B	1.1	<40.0B	2.2	<40.0B
Potassium	5000	28.2	32.4	<5000B	32.3	<5000B	40.0	<5000B	53.1	<5000B
Selenium	100	2	-0.70	<100	3.0	<100B	-0.20	<100	1.6	<100
Silver	10	.96	0.70	<10.0	0.30	<10.0	0.30	<10.0	0.90	<10.0
Sodium	5000	153	38.3	<5000	114	<5000	78.9	<5000	143	<5000
Thallium	10	2.69	6.7	<10.0B	3.0	<10.0B	7.5	<10.0B	4.4	<10.0B
Tin	50	2.2	anr							
Vanadium	50	.717	1.7	<50.0B	1.5	<50.0B	0.90	<50.0B	1.7	<50.0B
Zinc	20	.83	1.1	<20.0B	1.1	<20.0B	0.40	<20.0	0.70	<20.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F5006
Account: ITPAMONK - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1012M1.ASC Date Analyzed: 10/12/99 Methods: SW846 6010A
QC Limits: result < RDL Run ID: MA1588 Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	20.6	<200	41.7	<200B	51.3	<200	58.4	<200B
Antimony	60	2.39	2.3	<60.0	1.9	<60.0	3.3	<60	4.6	<60.0B
Arsenic	10	3.4	0.40	<10.0	-1.6	<10.0	2.5	<10	0.60	<10.0
Barium	200	.39	0.70	<200B	1.3	<200B	1.8	<200	1.5	<200B
Beryllium	5.0	.36	1.5	<5.0B	2.2	<5.0B	2.9	<5.0	2.8	<5.0B
Cadmium	4.0	.33	0.60	<4.0B	1.0	<4.0B	1.6	<4.0	1.3	<4.0B
Calcium	5000	19.5	7.0	<5000	28.2	<5000B	29.2	<5000	39.9	<5000B
Chromium	10	.637	0.40	<10.0	0.90	<10.0B	1.4	<10	1.1	<10.0B
Cobalt	50	.797	0.40	<50.0	0.80	<50.0B	1.2	<50	1.1	<50.0B
Copper	25	.747	-2.1	<25.0B	-2.5	<25.0B	-2.2	<25	-2.6	<25.0B
Iron	100	32	9.6	<100	32.5	<100B	40.6	<100	46.8	<100B
Lead	100	1.59	2.1	<100B	1.6	<100B	3.3	<100	2.1	<100B
Magnesium	5000	17.6	11.2	<5000	22.2	<5000B	30.3	<5000	25.8	<5000B
Manganese	15	.16	0.50	<15.0B	1.7	<15.0B	1.6	<15	1.6	<15.0B
Molybdenum	50	.68	anr							
Nickel	40	1	0.20	<40.0	1.4	<40.0B	1.4	<40	2.0	<40.0B
Potassium	5000	28.2	12.3	<5000	28.6	<5000B	33.2	<5000	23.6	<5000
Selenium	100	2	-2.0	<100B	1.6	<100	2.4	<100	0.90	<100
Silver	10	.96	1.2	<10.0B	1.4	<10.0B	1.6	<10	1.4	<10.0B
Sodium	5000	153	18.7	<5000	-20.2	<5000	153	<5000	133	<5000
Thallium	10	2.69	4.6	<10.0B	4.6	<10.0B	8.3	<10	5.0	<10.0B
Tin	50	2.2	anr							
Vanadium	50	.717	0.90	<50.0B	1.2	<50.0B	1.7	<50	1.5	<50.0B
Zinc	20	.83	0.10	<20.0	0.60	<20.0	1.0	<20	0.60	<20.0

(*) Outside of QC limits
(anr) Analyte not requested

000047

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F5006
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1012M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/12/99
Run ID: MA1588

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final
Aluminum	200	30	62.7	<200B
Antimony	60	2.39	4.2	<60.0B
Arsenic	10	3.4	1.7	<10.0
Barium	200	.39	1.6	<200B
Beryllium	5.0	.36	2.9	<5.0B
Cadmium	4.0	.33	1.3	<4.0B
Calcium	5000	19.5	140	<5000B
Chromium	10	.637	1.9	<10.0B
Cobalt	50	.797	1.1	<50.0B
Copper	25	.747	-1.6	<25.0B
Iron	100	32	46.0	<100B
Lead	100	1.59	2.7	<100B
Magnesium	5000	17.6	28.3	<5000B
Manganese	15	.16	1.8	<15.0B
Molybdenum	50	.68	anr	
Nickel	40	1	3.1	<40.0B
Potassium	5000	28.2	75.9	<5000B
Selenium	100	2	1.0	<100
Silver	10	.96	2.3	<10.0B
Sodium	5000	153	353	<5000B
Thallium	10	2.69	5.9	<10.0B
Tin	50	2.2	anr	
Vanadium	50	.717	1.7	<50.0B
Zinc	20	.83	0.90	<20.0B

(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F5006
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2132
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date: 10/07/99

10/07/99

Metal	F5006-4 Original	DUP	RPD	QC Limits	F5006-4 Original MS	Spikelot MPFLICP	% Rec	QC Limits
Aluminum	14400	14500	0.9	0-20	14400	21200	3145.06	218.3(b) 80-120
Antimony	0.97	1.4	32.7 (a)	0-20	0.97	59.6	108.45	54.0N 80-120
Arsenic	3.7	3.9	5.3	0-28	3.7	329	433.8	75.0 72-110
Barium	52.0	52.6	1.0	0-14	52.0	418	433.8	84.4 64-116
Beryllium	0.61	0.62	1.5	0-20	0.61	9.7	10.85	83.9 80-120
Cadmium	0	0	NC	0-16	0	8.8	10.85	81.2 64-120
Calcium	710	717	1.0	0-20	710	808	2711.26	1.6N 80-120
Chromium	15.3	15.4	0.8	0-33	15.3	56.2	43.38	94.3 66-119
Cobalt	7.0	7.1	1.2	0-20	7.0	95.0	108.45	81.1 80-120
Copper	6.1	6.2	1.7	0-39	6.1	51.5	54.23	83.7 65-124
Iron	13000	13200	0.9	0-20	13000	15100	2928.16	71.8 (b) 80-120
Lead	70.5	71.1	0.8	0-44	70.5	152	108.45	75.4 60-127
Magnesium	792	801	1.1	0-20	792	1130	2711.26	12.6N 80-120
Manganese	301	303	1.0	0-20	301	465	108.45	151.5N 80-120
Molybdenum	anr							
Nickel	6.6	6.7	1.8	0-30	6.6	99.1	108.45	85.3 71-119
Potassium	567	566	0.2	0-20	567	912	2711.26	12.7N 80-120
Selenium	0.0	0	NC	0-28	0.0	356	433.8	82.1 65-116
Silver	0.0	0.0	NC	0-21	0.0	6.6	10.85	61.2N 63-123
Sodium	290	292	0.6	0-20	290	262	2711.26	-1.0N 80-120
Thallium	0.00	0.00	NC	0-20	0.00	348	433.8	80.2 80-120
Tin	anr							
Vanadium	24.5	24.7	1.0	0-20	24.5	114	108.45	82.7 80-120
Zinc	23.2	23.8	2.8	0-31	23.2	111	108.45	80.9 69-120

Associated samples MP2132: F5006-4, F5006-5, F5006-6, F5006-7, F5006-8

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) RPD acceptable due to low duplicate and sample concentrations.

(b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F5006
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2132
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 10/07/99

Metal	F5006-4 Original MSD		Spikelet MPFLICP % Rec		QC Limits
Aluminum	14400	22100	3273.43	236.3(a)	80-120
Antimony	0.97	62.4	112.88	54.4N	80-120
Arsenic	3.7	343	451.51	75.1	72-110
Barium	52.0	435	451.51	84.9	64-116
Beryllium	0.61	10.1	11.29	84.2	80-120
Cadmium	0	9.2	11.29	81.5	64-120
Calcium	710	841	2821.93	4.6N	80-120
Chromium	15.3	58.5	45.15	95.7	66-119
Cobalt	7.0	98.9	112.88	81.4	80-120
Copper	6.1	53.7	56.44	84.3	65-124
Iron	13000	15800	3047.68	89.6	80-120
Lead	70.5	159	112.88	78.0	60-127
Magnesium	792	1180	2821.93	13.8N	80-120
Manganese	301	484	112.88	162.7N	80-120
Molybdenum					
Nickel	6.6	103	112.88	85.7	71-119
Potassium	567	953	2821.93	13.7N	80-120
Selenium	0.0	372	451.51	82.3	65-115
Silver	0.0	6.8	11.29	60.3N	63-123
Sodium	290	271	2821.93	-0.7N	80-120
Thallium	0.00	364	451.51	80.6	80-120
Tin					
Vanadium	24.5	119	112.88	83.7	80-120
Zinc	23.2	116	112.88	82.0	69-120

Associated samples MP2132: F5006-4, F5006-5, F5006-6, F5006-7, F5006-8

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

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OVERVIEW

Five (5) soil samples were analyzed for lead by EPA SW-846 Method 6010 and five (5) soil samples were analyzed for TAL metals by Methods 6010/7471. No site-specific Quality Control samples were analyzed. Accutest, located in Orlando, FL, performed the analyses.

SUMMARY

These samples were analyzed successfully.

MAJOR PROBLEMS

No major problems with the validity of the analytical data were found.

MINOR PROBLEMS

- The initial, continuing and/or method blanks contained all metals except arsenic, mercury and zinc. Sample results with concentrations less than five (5) times the blank concentration are qualified as blank contaminated (B).
- The metals antimony and manganese were recovered low, and calcium, magnesium, potassium and sodium were recovered very low (<30%) in the matrix spike and matrix spike duplicate samples associated with samples -25C, -291C, -60C, -324C1, -320C, -338C1, -558C1 and -80C. The positive results for these samples will be qualified biased low (L).
- The lead-only serial dilution sample associated with samples -411C and -374C was recovered high. The TAL metals serial dilution sample associated with samples -25C, -291C, -60C, -324C1, -320C, -338C1, -558C1 and -80C had an elevated recovery of calcium, chromium, cobalt, nickel, potassium and zinc. The results for these analytes should be qualified estimated (J).

NOTES

There are no notes associated with this data validation report.

REPORT CONTENT STATEMENT

These data were reviewed in accordance with USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses. The text of this report only addresses items that affect the validity of the data contained therein.

ATTACHMENT A

Glossary of Data Qualifiers

Glossary of Data Qualifier Codes

Codes Relating to Identification

(Confidence Concerning Presence or Absence of Compounds)

U = Not Detected. The associated number indicates the approximate sample concentration necessary to be detected.

(No Code) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm the presence or absence in future sampling efforts.

Codes Related to Quantitation

(Can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

Other Codes

Q = No analytical result.

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

ATTACHMENT B

Data Summary Forms

Data Summary Table

1 of 1

Site: FNTC - Bainbridge - Small Arms Ranges Confirmation Results

Lab: Accutest

Reviewer: Michael J. Lacy, Ph.D.

Date: 21 October 1999

Report Number: F5017

Sample I.D.	204-25C	204-291C	204-60C	204-324C1	204-320C	204-338C1	204-558C1	204-80C	204-411C	204-374C
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Date Sampled	9/28/1999	9/28/1999	9/28/1999	10/4/1999	9/28/1999	10/4/1999	10/4/1999	9/28/1999	9/28/1999	9/28/1999
Time Sampled	1430	1442	1451	1406	1500	1430	1433	1057	1100	0948
% Moisture	11.8	15.5	15.2	0.0	15.9	4.7	1.4	13.2	15.0	14.8
pH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	Result	VQ	Result	VQ	Result	VQ	Result	VQ	Result	VQ
Lead	96.3		---		20.3		---		28.4	J

Aluminum	---		15800		---		16700		17600		---		30000		39000		---		---	
Antimony	---		1.2	JBL	---		0.58	JBL	0.57	JBL	---		1.4	JBL	1.5	JBL	---		---	
Arsenic	---		3.4	B	---		2.7	B	2.9	B	---		3.4	B	2.7	B	---		---	
Barium	---		67.1		---		83.5		91.8		---		109		116		---		---	
Beryllium	---		0.97	B	---		1.1	B	1.40	B	---		1.1	B	1.2	B	---		---	
Cadmium	---		<0.04	U	---		<0.03	U	<0.04	U	---		<0.03	U	<0.04	U	---		---	
Calcium	---		862	JL	---		744	JL	655	JL	---		1240	JL	1270	JL	---		---	
Chromium	---		12.5	J	---		9.0	J	10.1	J	---		20.5	J	16.1	J	---		---	
Cobalt	---		8.1	JB	---		8.2	JB	8.1	JB	---		15.2	J	12.3	J	---		---	
Copper	---		8.8		---		8.5		11.7		---		16.4		14.3		---		---	
Iron	---		17000		---		15600		15000		---		33900		32600		---		---	
Lead	---		68.1		---		21.0		28.2		---		9.6	J	21.9	J	---		---	
Magnesium	---		1680	L	---		1690	L	1550	L	---		2780	L	3150	L	---		---	
Manganese	---		389	L	---		559	L	701	L	---		284	L	303	L	---		---	
Mercury	---		0.04	J	---		0.04	J	0.01	J	---		0.02	J	0.01	J	---		---	
Nickel	---		6.7	JB	---		5.1	JB	6.0	JB	---		9.9	JB	9.2	JB	---		---	
Potassium	---		1130	JL	---		966	JL	980	JL	---		1470	JL	2100	JL	---		---	
Selenium	---		<0.24	U	---		<0.20	U	<0.24	U	---		<0.21	U	<0.23	U	---		---	
Silver	---		<0.12	U	---		<0.09	U	<0.11	U	---		<0.1	U	<0.11	U	---		---	
Sodium	---		196	JBL	---		84.8	JBL	162	JBL	---		147	JBL	118	JBL	---		---	
Thallium	---		<0.32	U	---		<0.26	U	<0.32	U	---		<0.28	U	<0.30	U	---		---	
Vanadium	---		38.0		---		33.8		29.2		---		77.2		74.8		---		---	
Zinc	---		33.8	J	---		27.9	J	29.8	J	---		27.9	J	29.6	J	---		---	

VQ - Validation Qualifier

ATTACHMENT C

Laboratory Reported Results



Report of Analysis

Page 1 of 1

Client Sample ID: 204-25C
Lab Sample ID: F5017-3
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/28/99
Date Received: 10/06/99
Percent Solids: 88.2

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	96.3	11.5	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A

RDL = Reported Detection Limit

000003



Report of Analysis

Page 1 of 1

Client Sample ID: 204-291C

Lab Sample ID: F5017-4

Matrix: SO - Soil

Date Sampled: 09/28/99

Date Received: 10/06/99

Percent Solids: 84.5

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	16800	23.9	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Antimony	1.2 B	7.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Arsenic	3.4	1.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Barium	67.1	23.9	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Beryllium	0.97	0.60	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Cadmium	0.04 U	0.48	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Calcium	862	598	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Chromium	12.5	1.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Cobalt	8.1	6.0	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Copper	8.8	3.0	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Iron	17000	12.0	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Lead	68.1	12.0	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Magnesium	1680	598	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Manganese	389	1.8	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Mercury	0.04 B	0.20	mg/kg	1	10/07/99	10/08/99 SJL	SW846 7471A
Nickel	6.7	4.8	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Potassium	1130	598	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Selenium	0.24 U	12.0	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Silver	0.12 U	1.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Sodium	196 B	598	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Thallium	0.32 U	1.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Vanadium	38.0	6.0	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Zinc	33.8	2.4	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A

RDL = Reported Detection Limit

**ACCUTEST****Report of Analysis**

Page 1 of 1

Client Sample ID: 204-60C**Lab Sample ID:** F5017-5**Matrix:** SO - Soil**Project:** Bainhridge**Date Sampled:** 09/28/99**Date Received:** 10/06/99**Percent Solids:** 84.8**Metals Analysis**

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	20.3	11.8	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A

RDL = Reported Detection Limit

000005



Report of Analysis

Page 1 of 1

Client Sample ID: 204-324C1

Lab Sample ID: F5017-6

Matrix: SO - Soil

Date Sampled: 10/04/99

Date Received: 10/06/99

Percent Solids: 100.0

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	16700	19.4	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Antimony	0.58 B	5.8	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Arsenic	2.7	0.97	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Barium	83.5	19.4	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Beryllium	1.1	0.49	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Cadmium	0.03 U	0.39	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Calcium	744	485	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Chromium	9.0	0.97	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Cobalt	8.2	4.9	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Copper	8.5	2.4	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Iron	15600	9.7	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Lead	21.0	9.7	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Magnesium	1690	485	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Manganese	559	1.5	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Mercury	0.04 B	0.16	mg/kg	1	10/07/99	10/08/99 SJL	SW846 7471A
Nickel	5.1	3.9	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Potassium	966	485	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Selenium	0.20 U	9.7	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Silver	0.09 U	0.97	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Sodium	84.8 B	485	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Thallium	0.26 U	0.97	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Vanadium	33.8	4.9	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Zinc	27.9	1.9	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A

RDL = Reported Detection Limit

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Report of Analysis

Page 1 of 1

Client Sample ID: 204-320C

Lab Sample ID: F5017 7

Matrix: SO - Soil

Date Sampled: 09/28/99

Date Received: 10/06/99

Percent Solids: 84.1

Project: Bainbridge

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	17600	23.8	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Antimony	0.57 B	7.1	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Arsenic	2.9	1.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Barium	91.8	23.8	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Beryllium	1.4	0.59	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Cadmium	0.04 U	0.48	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Calcium	655	595	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Chromium	10.1	1.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Cobalt	8.1	5.9	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Copper	11.7	3.0	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Iron	15000	11.9	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Lead	28.2	11.9	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Magnesium	1550	595	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Manganese	701	1.8	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Mercury	0.01 B	0.21	mg/kg	1	10/07/99	10/08/99 SJL	SW846 7471A
Nickel	6.0	4.8	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Potassium	980	595	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Selenium	0.24 U	11.9	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Silver	0.11 U	1.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Sodium	162 B	595	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Thallium	0.32 U	1.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Vanadium	29.2	5.9	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Zinc	29.8	2.4	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A

RDL = Reported Detection Limit



Report of Analysis

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Client Sample ID: 204-338C1

Lab Sample ID: F5017-8

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 10/04/99

Date Received: 10/06/99

Percent Solids: 95.3

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	19.9	10.1	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A

RDL = Reported Detection Limit

000008



Report of Analysis

Page 1 of 1

Client Sample ID: 204-558C1

Lab Sample ID: F5017-9

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 10/04/99

Date Received: 10/06/99

Percent Solids: 98.6

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	30000	20.7	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Antimony	1.4 B	6.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Arsenic	3.4	1.0	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Barium	109	20.7	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Beryllium	1.1	0.52	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Cadmium	0.03 U	0.41	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Calcium	1240	517	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Chromium	20.5	1.0	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Cobalt	15.2	5.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Copper	16.4	2.6	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Iron	33900	10.3	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Lead	9.6 B	10.3	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Magnesium	2780	517	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Manganese	284	1.6	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Mercury	0.02 B	0.17	mg/kg	1	10/07/99	10/08/99 SJL	SW846 7471A
Nickel	9.9	4.1	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Potassium	1470	517	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Selenium	0.21 U	10.3	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Silver	0.1 U	1.0	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Sodium	147 B	517	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Thallium	0.28 U	1.0	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Vanadium	77.2	5.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Zinc	27.9	2.1	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A

RDL = Reported Detection Limit

000000



Report of Analysis

Page 1 of 1

Client Sample ID: 204-80C
Lab Sample ID: F5017-10
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/28/99
Date Received: 10/06/99
Percent Solids: 86.8

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Aluminum	39000	22.4	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Antimony	1.5 B	6.7	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Arsenic	2.7	1.1	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Barium	116	22.4	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Beryllium	1.2	0.56	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Cadmium	0.04 U	0.45	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Calcium	1270	559	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Chromium	16.1	1.1	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Cobalt	12.3	5.6	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Copper	14.3	2.8	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Iron	32600	11.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Lead	21.9	11.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Magnesium	3150	559	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Manganese	303	1.7	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Mercury	0.01 B	0.19	mg/kg	1	10/07/99	10/08/99 SJL	SW846 7471A
Nickel	9.2	4.5	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Potassium	2100	559	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Selenium	0.23 U	11.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Silver	0.11 U	1.1	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Sodium	118 B	559	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Thallium	0.30 U	1.1	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Vanadium	74.8	5.6	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A
Zinc	29.6	2.2	mg/kg	1	10/07/99	10/08/99 JK	SW846 6010A

RDL = Reported Detection Limit

600010

**ACCUTEST.****Report of Analysis**

Page 1 of 1

Client Sample ID: 204-411C**Lab Sample ID:** F5017-11**Matrix:** SO - Soil**Project:** Bainbridge**Date Sampled:** 09/28/99**Date Received:** 10/06/99**Percent Solids:** 85.0**Metals Analysis**

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	28.4	11.9	mg/kg	1	10/08/99	10/08/99 JK	SW846 6010A

RDL = Reported Detection Limit

000011



ACCUTEST

Report of Analysis

Page 1 of 1

Client Sample ID: 204-374C
Lab Sample ID: F5017-12
Matrix: SO - Soil
Project: Bainbridge

Date Sampled: 09/28/99
Date Received: 10/06/99
Percent Solids: 85.2

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	87.3	10.4	mg/kg	1	10/08/99	10/08/99 JK	SW846 6010A

RDL = Reported Detection Limit

035012

ATTACHMENT D

Laboratory Reported Tentatively Identified Compounds

(Not Applicable)

ATTACHMENT E

Support Documentation



INTERNATIONAL
TECHNOLOGY
CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document J. 50971
Page 1 of 2

Project Name/No. Brimbridge 748939 Samples Shipment Date 7/10/5/99 Bill to: IT Corp
Sample Team Members 2 Treater/Klinger Lab Destination 8 Accutest Lab 2790 Mossdale Blvd
Profit Center No. 3 Lab Contact 9 Linda Williams Monroeville, PA 15146
Project Manager 4 L. Stearns Project Contact/Phone 12 Dick Treater Final Report to: Dorothy Small
Purchase Order No. 6 748939-007 Carrier/Waybill No. 13 FedEx 790306993782 Larry Stearns
Required Report Date 11 3 days IT Corp
2790 Mossdale Blvd
Monroeville, PA 15146

ONE CONTAINER PER LINE

Sample Number ¹⁴	Sample Description/Type ¹⁵	Date/Time Collected ¹⁶	Container Type ¹⁷	Sample Volume ¹⁸	Pre-servative ¹⁹	Requested Testing Program ²⁰	Condition on Receipt ²¹	Disposal Record No. ²²
204-35 C1	Comp 3pt Soil Bldg 204 Grid P16	10/4/99 1354	1-803	403	4°C	Total Lead 6010	F5017-1	
204-368C	Comp 3pt Soil Bldg 204 Grid P1	9/28/99 0927		203			-2	
204-25C	Comp 3pt Soil Bldg 204 Grid P11	9/28/99 1930		203			-3	
204-291C	Comp 3pt Soil Bldg 204 Grid P15	9/28/99 1442		403		Total Lead 6010 TAL Metals	-4	MS/MSD
204-60C	Comp 3pt Soil Bldg 204 Grid P18	9/28/99 1451		403		Total Lead 6010	-5	
204-324 C1	Comp 3pt Soil Bldg 204 Grid P20	10/4/99 1406		203		Total Lead 6010 TAL Metals	-6	
204-320 C	Comp 3pt Soil Bldg 204 Grid P21	9/28/99 1500		203		Total Lead 6010 TAL Metals	-7	
204-338 C1	Comp 3pt Soil Bldg 204 Grid P22	10/4/99 1430		203		Total Lead 6010	-8	

Special Instructions: 23 E-mail results to Dorothy Small

Possible Hazard Identification: 24 Lead
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒ Sample Disposal: 25
Return to Client ☐ Disposal by Lab ☒ Archive (mos.)

Turnaround Time Required: 26 3 days
Normal ☐ Rush ☒ QC Level: 27
I. ☐ II. ☐ III. ☒ Project Specific (specify): Many NFESC Level C

1. Relinquished by <u>28 Dick Treater</u> (Signature/Affiliation) <u>Dick Treater / IT</u>	Date: <u>10/5/99</u> Time: <u>1730</u>	1. Received by <u>29</u> (Signature/Affiliation) <u>Wanda</u>	Date: <u>10-6-99</u> Time: <u>10:00</u>
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: 29
Fax results to Dick Treater
410-318-3232

Cooler - 4°C

Reference Document No.³⁰ 559871Page 2 of 2

Project Name Bainbridge

Project No. 798939

Samples Shipment Date 10/5/99

[illegible]

White: To accompany samples

Yellow: Field copy

*See back of form for special instructions

Job# FFS017

Accutest Laboratories Southeast
Case Narrative

3) Metals Conformance / Non-conformance Summary

Blank level below reporting limits?

Yes (✓)

No ()

If no, list analytes above reporting limits: MP2/41, 2133
2131

Spike blank (LCS) data within acceptable Limits?

Yes (✓)

No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

Matrix spike data within acceptable limits?

Yes ()

No (✓)

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

see page 45, 46 for details (

Matrix duplicate data within acceptable limits?

Yes ()

No (✓)

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

see page 45, 46 for details

Samples prepared and analyzed within holding time?

Yes (✓)

No ()

If holding times were not met, list analytes where holding times were exceeded and explain: _____

All analytical criteria met (calibration, CCV, ICV, CCB, etc.)?

Yes ()

No (✓)

If not met, list effected samples and analytes: see page 40 for TL CCB out.

Comments: MS/Rep out due to matrix.

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F5017
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1008M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/08/99
Run ID: MA1583

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	20.2	<200	17.0	<200	46.9	<200B	25.8	<200
Antimony	60	2.39	5.9	<60.0B	3.8	<60.0B	5.8	<60.0B	4.0	<60.0B
Arsenic	10	3.4	0.50	<10.0	1.8	<10.0	-0.20	<10.0	-0.80	<10.0
Barium	200	.39	0.90	<200B	0.60	<200B	1.0	<200B	1.0	<200B
Beryllium	5.0	.36	1.3	<5.0B	1.2	<5.0B	1.8	<5.0B	2.0	<5.0B
Cadmium	4.0	.33	1.1	<4.0B	0.80	<4.0B	1.1	<4.0B	0.90	<4.0B
Calcium	5000	19.5	16.6	<5000	11.8	<5000	36.6	<5000B	14.4	<5000
Chromium	10	.63	1.0	<10.0B	0.00	<10.0B	1.2	<10.0B	1.0	<10.0B
Cobalt	50	.797	1.2	<50.0B	1.0	<50.0B	1.0	<50.0B	0.90	<50.0B
Copper	25	.747	0.60	<25.0	-0.20	<25.0	-0.40	<25.0	-0.90	<25.0B
Iron	100	32	11.9	<100	15.7	<100	22.8	<100	14.5	<100
Lead	100	1.59	-4.0	<100B	-4.9	<100B	-6.0	<100B	-1.8	<100B
Magnesium	5000	17.6	17.9	<5000B	14.1	<5000	40.5	<5000B	19.3	<5000B
Manganese	15	.16	0.90	<15.0B	0.70	<15.0B	1.0	<15.0B	0.90	<15.0B
Molybdenum	50	.68	anr							
Nickel	40	1	1.3	<40.0B	0.60	<40.0	1.0	<40.0B	1.4	<40.0B
Potassium	5000	28.2	2.2	<5000	1.4	<5000	14.1	<5000	15.1	<5000
Selenium	100	2	1.2	<100	2.4	<100B	3.9	<100B	4.4	<100B
Silver	10	.96	0.30	<10.0	0.60	<10.0	0.40	<10.0	0.50	<10.0
Sodium	5000	153	-23.2	<5000	20.4	<5000	-36.0	<5000	74.0	<5000
Thallium	10	2.69	5.2	<10.0B	3.4	<10.0B	5.4	<10.0B	3.5	<10.0B
Tin	50	2.2	anr							
Vanadium	50	.717	1.4	<50.0B	0.50	<50.0	1.0	<50.0B	1.0	<50.0B
Zinc	20	.83	0.70	<20.0	0.30	<20.0	0.40	<20.0	0	<20.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F5017
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1008M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/08/99
Run ID: MA1583

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	83.1	<200B	76.2	<200B	57.2	<200B	56.9	<200B
Antimony	60	2.39	3.4	<60.0B	2.7	<60.0B	2.3	<60.0	3.6	<60.0B
Arsenic	10	3.4	1.7	<10.0	0	<10.0	0.70	<10.0	1.1	<10.0
Barium	200	.39	1.5	<200B	1.1	<200B	1.1	<200B	1.2	<200B
Beryllium	5.0	.36	2.1	<5.0B	2.0	<5.0B	2.1	<5.0B	2.3	<5.0B
Cadmium	4.0	.33	0.90	<4.0B	0.70	<4.0B	0.90	<4.0B	1.0	<4.0B
Calcium	5000	19.5	16.7	<5000	13.4	<5000	104	<5000B	79.1	<5000B
Chromium	10	.637	1.1	<10.0B	1.2	<10.0B	0.90	<10.0B	1.3	<10.0B
Cobalt	50	.797	0.90	<50.0B	0.80	<50.0	0.80	<50.0B	1.3	<50.0B
Copper	25	.747	-1.0	<25.0B	-1.3	<25.0B	-1.7	<25.0B	-1.4	<25.0B
Iron	100	32	45.7	<100B	62.2	<100B	45.4	<100B	49.8	<100B
Lead	100	1.59	-4.3	<100B	-5.0	<100B	-4.9	<100B	-5.8	<100B
Magnesium	5000	17.6	24.9	<5000B	22.0	<5000B	20.3	<5000B	28.2	<5000B
Manganese	15	.16	1.4	<15.0B	1.6	<15.0B	2.3	<15.0B	1.8	<15.0B
Molybdenum	50	.68	anr							
Nickel	40	1	1.1	<40.0B	1.5	<40.0B	0.30	<40.0	2.0	<40.0B
Potassium	5000	28.2	9.6	<5000	17.9	<5000	-0.90	<5000	32.1	<5000B
Selenium	100	2	3.2	<100B	3.5	<100B	2.5	<100B	1.5	<100
Silver	10	.96	1.5	<10.0B	1.2	<10.0B	1.3	<10.0B	0.80	<10.0
Sodium	5000	153	97.3	<5000	79.1	<5000	68.5	<5000	94.8	<5000
Thallium	10	2.69	7.9	<10.0B	3.4	<10.0B	5.6	<10.0B	5.5	<10.0B
Tin	50	2.2	anr							
Vanadium	50	.717	0.70	<50.0B	0.90	<50.0B	1.0	<50.0B	1.0	<50.0B
Zinc	20	.83	0.40	<20.0	0	<20.0	0.40	<20.0	0.20	<20.0

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F5017
Account: ITPAMONR IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1008M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/08/99
Run ID: MA1583

Methods: SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final
Aluminum	200	30	45.6	<200	82.9	<200B
Antimony	60	2.39	5.1	<200	4.0	<60.0B
Arsenic	10	3.4	0.51	<500	-0.20	<10.0
Barium	200	.39	1.2	<1000	1.6	<200B
Beryllium	5.0	.36	2.5	<5.0	2.6	<5.0B
Cadmium	4.0	.33	1.1	<50	1.3	<4.0B
Calcium	5000	19.5	48.8	<5000	26.7	<5000B
Chromium	10	.637	1.4	<50	1.6	<10.0B
Cobalt	50	.797	1.3	<50	1.7	<50.0B
Copper	25	.747	-1.3	<25	-1.1	<25.0B
Iron	100	32	23.3	<100	68.3	<100B
Lead	100	1.59	-4.4	<500	-5.5	<100B
Magnesium	5000	17.6	26.7	<5000	34.0	<5000B
Manganese	15	.16	1.6	<15	2.1	<15.0B
Molybdenum	50	.68	anr			
Nickel	40	1	2.8	<40	1.6	<40.0B
Potassium	5000	28.2	17.6	<5000	52.7	<5000B
Selenium	100	2	1.3	<500	4.0	<100B
Silver	10	.96	0.89	<50	0.90	<10.0
Sodium	5000	153	134	<5000	293	<5000B
Thallium	10	2.69	4.6	<500	11.4	(a)
Tin	50	2.2	anr			
Vanadium	50	.717	1.3	<50	1.6	<50.0B
Zinc	20	.93	0.55	<20	0.80	<20.0

(*) Outside of QC limits

(anr) Analyte not requested

(a) Possible positive bias, but all sample results < the DL.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F5017
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2131
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 10/07/99

Metal	RDL	IDL	MB raw	final
Aluminum	20.0	3	1.4	<20.0
Antimony	6.0	.24	-0.04	<6.0
Arsenic	1.0	.34	-0.09	<1.0
Barium	20.0	.04	0.05	<20.0
Beryllium	0.50	.04	0.11	<0.50
Cadmium	0.40	.03	0.003	<0.40
Calcium	500	2	0.05	<500
Chromium	1.0	.06	0.02	<1.0
Cobalt	5.0	.08	0.02	<5.0
Copper	2.5	.07	-0.19	<2.5
Iron	10.0	3.2	0.26	<10.0
Lead	10.0	.16	-0.09	<10.0
Magnesium	500	1.8	0.26	<500
Manganese	1.5	.02	0.01	<1.5
Molybdenum	5.0	.07	anr	
Nickel	4.0	.1	-0.01	<4.0
Potassium	500	2.8	-0.46	<500
Selenium	10.0	.2	0.13	<10.0
Silver	1.0	.1	0.04	<1.0
Sodium	500	15.3	17.3	<500
Thallium	1.0	.27	0.06	<1.0
Tin	5.0	.22	anr	
Vanadium	5.0	.07	-0.009	<5.0
Zinc	2.0	.08	1.2	<2.0

Associated samples MP2131: F5017-1, F5017-2, F5017-3, F5017-4, F5017-5, F5017-6, F5017-7, F5017-8, F5017-9, F5017-10

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

000013

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F5017
 Account: ITPAMOM IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2131
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date:

10/07/99

10/07/99

Metal	F5017-10 Original	DUP	RPD	QC Limits	F5017-10 Original MS	SpikeLot MPFLICP	% Rec	QC Limits
Aluminum	39000	39000	0.0	0-20	39000	46700	3151.9	243.6(a) 80-120
Antimony	1.5	1.8	13.8	0-20	1.5	53.7	108.69	48.0N 80-120
Arsenic	2.7	2.9	9.9	0-28	2.7	351	434.74	80.1 72-110
Barium	116	116	0.1	0-14	116	491	434.74	86.3 64-116
Beryllium	1.2	1.2	0.1	0-20	1.2	10.9	10.87	89.4 80-120
Cadmium	0.0	0.0	NC	0-16	0.0	9.0	10.87	82.9 64-120
Calcium	1270	1270	0.1	0-20	1270	1240	2717.16	2.5N 80-120
Chromium	16.1	16.2	0.5	0-33	16.1	54.6	43.47	88.4 66-119
Cobalt	12.3	12.3	0.5	0-20	12.3	103	108.69	83.8 80-120
Copper	14.3	14.4	0.5	0-39	14.3	63.3	54.34	90.3 65-124
Iron	32600	32600	0.0	0-20	32600	36200	2934.53	124.6(a) 80-120
Lead	21.9	22.2	1.4	0-44	21.9	110	108.69	80.8 60-127
Magnesium	3150	3160	0.1	0-20	3150	3280	2717.16	4.7N 80-120
Manganese	303	304	0.1	0-20	303	348	108.69	41.1N 80-120
Molybdenum	anr							
Nickel	9.2	9.2	0.5	0-30	9.2	102	108.69	85.4 71-119
Potassium	2100	2100	0.3	0-20	2100	2200	2717.16	3.9N 80-120
Selenium	0.0	0.0	NC	0-28	0.0	376	434.74	86.4 65-115
Silver	0.0	0.0	NC	0-21	0.0	7.4	10.87	68.5 63-123
Sodium	118	127	7.6	0-20	118	110	2717.16	-0.3N 80-120
Thallium	0.00	0.00	NC	0-20	0.00	339	434.74	77.9N 80-120
Tin	anr							
Vanadium	74.8	74.8	0.0	0-20	74.8	175	108.69	91.9 80-120
Zinc	29.6	29.7	0.6	0-31	29.6	121	108.69	84.4 69-120

Associated samples MP2131: F5017-1, F5017-2, F5017-3, F5017-4, F5017-5, F5017-6, F5017-7, F5017-8, F5017-9, F5017-10

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

600045

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F5017
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2131
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date: 10/07/99

Metal	F5017-10 Original MS	Spikelot MPFLICP	% Rec	QC Limits
Aluminum	39000	46700	3181.92	240.1(a) 80-120
Antimony	1.5	54.2	109.72	48.0N 80-120
Arsenic	2.7	351	438.89	79.3 72-110
Barium	116	491	438.89	85.6 64-116
Beryllium	1.2	10.9	10.97	88.5 80-120
Cadmium	0.0	9.0	10.97	82.1 64-120
Calcium	1270	1340	2743.03	3.4N 80-120
Chromium	16.1	54.4	43.89	87.3 66-119
Cobalt	12.3	103	109.72	83.0 80-120
Copper	14.3	63.3	54.86	89.4 65-124
Iron	32600	36200	2962.48	122.8(a) 80-120
Lead	21.9	109	109.72	79.7 60-127
Magnesium	3150	3280	2743.03	4.5N 80-120
Manganese	303	348	109.72	40.6N 80-120
Molybdenum				
Nickel	9.2	102	109.72	84.5 71-119
Potassium	2100	2210	2743.03	4.2N 80-120
Selenium	0.0	376	438.89	85.6 65-115
Silver	0.0	7.4	10.97	67.1 63-123
Sodium	118	113	2743.03	-0.2N 80-120
Thallium	0.00	339	438.89	77.3N 80-120
Tin				
Vanadium	74.8	175	109.72	91.1 80-120
Zinc	29.6	121	109.72	83.3 69-120

Associated samples MP2131: F5017-1, F5017-2, F5017-3, F5017-4, F5017-5, F5017-6, F5017-7, F5017-8, F5017-9, F5017-10

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

000048

SERIAL DILUTION RESULTS SUMMARY

Login Number: F5017
 Account: ITPAMONR IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2141
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: ug/l

Prep Date: 10/08/99

Metal	F5024-1			QC Limits
	Original	SDL 1:5	RPD	
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	104	86.2	17.3	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Thallium	anr			
Tin	anr			
Vanadium	anr			
Zinc	anr			

Associated samples MP2141: F5017-11, F5017-12

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

000000

SERIAL DILUTION RESULTS SUMMARY

Login Number: F5017
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2131
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: ug/l

Prep Date: 10/07/99

Metal	F5017-10 Original	SDL 1:5	RPD	QC Limits
Aluminum	349000	384000	10.0	0-10
Antimony	13.8	17.4	26.0 (a)	0-10
Arsenic	23.7	0.00	100.0(a)	0-10
Barium	1040	1130	9.2	0-10
Beryllium	10.5	16.6	58.3 (a)	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	11400	12700	11.6	0-10
Chromium	144	161	11.4	0-10
Cobalt	110	123	12.0	0-10
Copper	128	131	2.7	0-10
Iron	291000	314000	7.8	0-10
Lead	196	182	6.7	0-10
Magnesium	28200	30800	9.5	0-10
Manganese	2710	2980	9.8	0-10
Molybdenum	anr			
Nickel	81.9	95.6	16.7	0-10
Potassium	18700	22200	18.4	0-10
Selenium	0.00	0.00	NC	0-10
Silver	0.00	0.00	NC	0-10
Sodium	1060	1640	55.6 (a)	0-10
Thallium	0.00	0.00	NC	0-10
Tin	anr			
Vanadium	669	731	9.3	0-10
Zinc	264	330	24.7	0-10

Associated samples MP2131: F5017-1, F5017-2, F5017-3, F5017-4, F5017-5, F5017-6, F5017-7, F5017-8, F5017-9, F5017-10

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

000001

OVERVIEW

One (1) soil sample was analyzed for lead by EPA SW-846 Method 6010. No site-specific Quality Control samples were analyzed. Accutest, located in Orlando, FL, performed the analyses.

SUMMARY

This sample was analyzed successfully.

MAJOR PROBLEMS

No major problems with the validity of the analytical data were found.

MINOR PROBLEMS

- The serial dilution sample had an elevated recovery of lead. The result for this analyte should be qualified estimated (J).

NOTES

There are no notes associated with this data validation report.

REPORT CONTENT STATEMENT

These data were reviewed in accordance with USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses. The text of this report only addresses items that affect the validity of the data contained therein.

ATTACHMENT A

Glossary of Data Qualifiers

Glossary of Data Qualifier Codes

Codes Relating to Identification

(Confidence Concerning Presence or Absence of Compounds)

U = Not Detected. The associated number indicates the approximate sample concentration necessary to be detected.

(No Code) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm the presence or absence in future sampling efforts.

Codes Related to Quantitation

(Can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

Other Codes

Q = No analytical result.

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

ATTACHMENT B

Data Summary Forms

Data Summary Table

1 of 1

Site: FNTC - Bainbridge - Small Arms Ranges Confirmation Results

Lab: Accutest

Reviewer: Michael J. Lacy, Ph.D.

Date: 21 October 1999

Repor: Number: F5024

Sample I.D.	204-331C1	
Matrix	Soil	
Units	mg/kg	
Date Sampled	10/4/1999	
Time Sampled	1403	
% Moisture	0.6	
pH	N/A	
Dilution Factor	1.0	
	Result	VQ
Lead	10	J

VQ - Validation Qualifier

ATTACHMENT C

Laboratory Reported Results



ACCUTEST

Report of Analysis

Page 1 of 1

Client Sample ID: 204-331C1

Lab Sample ID: F5024-1

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 10/04/99

Date Received: 10/07/99

Percent Solids: 99.4

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	10	9.6	mg/kg	1	10/08/99	10/08/99 JK	SW846 6010A

RDL = Reported Detection Limit

ATTACHMENT D

Laboratory Reported Tentatively Identified Compounds

(Not Applicable)

ATTACHMENT E

Support Documentation



INTERNATIONAL
TECHNOLOGY
CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 558872
Page 1 of 1

Project Name/No. ¹ Bainbridge 792939 Samples Shipment Date ⁷ 10/6/99
Sample Team Members ² Treater/Klinger Lab Destination ⁸ Accutest Lab
Profit Center No. ³ Lab Contact ⁹ Linda Williams
Project Manager ⁴ C. Stearns Project Contact/Phone ¹² 410-378-3450
Purchase Order No. ⁶ 798434-007 Carrier/Waybill No. ¹³ FedEx 790307296881
Required Report Date ¹¹ 3 days

Bill to: ⁵ IT Corp.
2790 Moss Side Blvd
Monroeville, PA 15146
Final Report to: ¹⁰ Dorothy Small
Larry Stearns
IT Corp.
2790 Moss Side Blvd
Monroeville, PA 15146

ONE CONTAINER PER LINE

Sample ¹⁴ Number	Sample ¹⁵ Description/Type	Date/Time ¹⁶ Collected	Container ¹⁷ Type	Sample ¹⁸ Volume	Pre- ¹⁹ servative	Requested Testing ²⁰ Program	Condition on ²¹ Receipt	Disposal ²² Record No.
204-331C1	Comp 3pt Soil Bldg 204 Grid P19	10/4/99 1403	1-503	203	4°C	Total Lead 6010		MS/MSD

Special Instructions: ²³ E-mail results to Dorothy Small

Possible Hazard Identification: ²⁴ Lead
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: ²⁵
Return to Client ☐ Disposal by Lab ☒ Archive (mos.)

Turnaround Time Required: ²⁶

Normal ☐ Rush ☒ 3 days

QC Level: ²⁷

I. ☐ II. ☐ III. ☒

Project Specific (specify): Navy AFESC Level C

1. Relinquished by ²⁸ Dick Treater
(Signature/Affiliation) Dick Treater / IT

Date: 10/6/99
Time: 1230

1. Received by ²⁸ [Signature]
(Signature/Affiliation) ITC Line

Date: 10/7/99
Time: 1000

2. Relinquished by
(Signature/Affiliation)

Date:
Time:

2. Received by
(Signature/Affiliation)

Date:
Time:

3. Relinquished by
(Signature/Affiliation)

Date:
Time:

3. Received by
(Signature/Affiliation)

Date:
Time:

Comments: ²⁹

Fax results to Dick Treater 410-378-3232

White: To accompany samples

Yellow: Field copy

*See back of form for special instructions.

Accutest Laboratories Southeast
Case Narrative

Job (SDG) No.: F5524

Samples: 1

Analysis Performed: Metals

1) **Sample Receipt Conformance / Non-Conformance Summary**

Custody Seals on Coolers?	Yes <input checked="" type="checkbox"/> ()	No ()
Custody Seals in Tact?	Yes <input checked="" type="checkbox"/> ()	No ()
Chain of Custody Sealed in Plastic?	Yes <input checked="" type="checkbox"/> ()	No ()
Chain of Custody Filled out Properly?	Yes <input checked="" type="checkbox"/> ()	No ()
Enough ice and Packing material?	Yes <input checked="" type="checkbox"/> ()	No ()
All Bottles Sealed?	Yes <input checked="" type="checkbox"/> ()	No ()
Any Bottles Broken?	Yes ()	No <input checked="" type="checkbox"/> ()
Labels in good condition?	Yes <input checked="" type="checkbox"/> ()	No ()
Labels agree with chain of custody?	Yes <input checked="" type="checkbox"/> ()	No ()
Correct Containers Used?	Yes <input checked="" type="checkbox"/> ()	No ()
Preserved Properly?	Yes <input checked="" type="checkbox"/> ()	No ()
Sufficient Sample?	Yes <input checked="" type="checkbox"/> ()	No ()

Comments: _____

000004

Job# F 5024

Accutest Laboratories Southeast
Case Narrative

3) Metals Conformance / Non-conformance Summary

Blank level below reporting limits? MP2141 Yes (✓) No ()

If no, list analytes above reporting limits: _____

Spike blank (LCS) data within acceptable Limits? MP2141 Yes (✓) No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

Matrix spike data within acceptable limits? MP2141 Yes (✓) No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

Matrix duplicate data within acceptable limits? MP2141 Yes (✓) No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

Samples prepared and analyzed within holding time? Yes (✓) No ()

If holding times were not met, list analytes where holding times were exceeded and explain: _____

All analytical criteria met (calibration, CCV, ICV, CCB, etc.)? Yes (✓) No ()

If not met, list effected samples and analytes: _____

Comments: _____

SERIAL DILUTION RESULTS SUMMARY

Login Number: F5024
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2141
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: ug/l

Prep Date: 10/08/99

Metal	F5024-1			QC Limits
	Original	SDL 1:5	RPD	
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	104	86.2	17.3	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Thallium	anr			
Tin	anr			
Vanadium	anr			
Zinc	anr			

Associated samples MP2141: F5024-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

5

5

5

OVERVIEW

One (1) soil samples were analyzed for lead by EPA SW-846 Method 6010. No site-specific Quality Control samples were analyzed. Accutest, located in Orlando, FL, performed the analyses.

SUMMARY

This sample was analyzed successfully.

MAJOR PROBLEMS

No major problems with the validity of the analytical data were found.

MINOR PROBLEMS

- The continuing calibration blanks contained lead at greater than the instrument detection limit. Sample results with concentrations less than five (5) times the blank concentration are qualified as blank contaminated (B).
- Matrix spike and matrix spike duplicate samples had low recoveries of lead. Lead results for this sample must be qualified biased low (L).
- The serial dilution sample had a relative percent difference greater than ten (10) percent. The lead result should be qualified estimated (J).

NOTES

- The laboratory duplicate had a relative percent difference within the required 20 percent.

REPORT CONTENT STATEMENT

These data were reviewed in accordance with USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses. The text of this report only addresses items that affect the validity of the data contained therein.

ATTACHMENT A

Glossary of Data Qualifiers

Glossary of Data Qualifier Codes

Codes Relating to Identification

(Confidence Concerning Presence or Absence of Compounds)

U = Not Detected. The associated number indicates the approximate sample concentration necessary to be detected.

(No Code) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm the presence or absence in future sampling efforts.

Codes Related to Quantitation

(Can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

Other Codes

Q = No analytical result.

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

ATTACHMENT B

Data Summary Forms

Data Summary Table

Site: FNTC - Bainbridge - Small Arms Ranges Confirmation Results

Lab: Accutest

Reviewer: Michael J. Lacy, Ph.D.

Date: 21 October 1999

Report Number: F5041

Sample I.D.	404-76C1
Matrix	Soil
Units	mg/kg
Date Sampled	10/8/1999
Time Sampled	1015
% Moisture	7.3
pH	N/A
Dilution Factor	1.0
Lead	Result VQ 10.6 JBL

VQ - Validation Qualifier

ATTACHMENT C

Laboratory Reported Results



ACCUTEST.

Report of Analysis

Page 1 of 1

Client Sample ID: 404-76C1

Lab Sample ID: F5041-1

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 10/08/99

Date Received: 10/09/99

Percent Solids: 92.7

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	10.6 B	10.7	mg/kg	1	10/13/99	10/13/99 JK	SW846 6010A

RDL = Reported Detection Limit

000003

ATTACHMENT D

Laboratory Reported Tentatively Identified Compounds

(Not Applicable)

ATTACHMENT E

Support Documentation



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document #
Page 1 of 1

Project Name/No. Bainbridge 798939
Sample Team Members Treuter/Klinger
Profit Center No. 3
Project Manager L. Stearns
Purchase Order No. 798939-007
Required Report Date Oct 13 @ 1700

Samples Shipment Date 7/10/8/44
Lab Destination Accutest Lab
Lab Contact Linda Williams
Project Contact/Phone 110-378-3450
Carrier/Waybill No. FedEx 79030729 6609

Bill to: IT Corp
2790 Musside Blvd
Monroeville, PA 15146
Dorothy Small
Larry Stearns
IT Corp
2790 Musside Blvd
Monroeville, PA 15146

ONE CONTAINER PER LINE

Sample ¹⁴ Number	Sample ¹⁵ Description/Type	Date/Time ¹⁶ Collected	Container ¹⁷ Type	Sample ¹⁸ Volume	Pre- ¹⁹ servative	Requested Testing ²⁰ Program	Condition on ²¹ Receipt	Disposal ²² Record No.
404-76C1	Comp 3pt Soil Bldg 404 Grid P3	10/8/99 1015	1-803	203	4°C	Total Lead 6010		MS/MSD

Special Instructions: ²³ E-mail results to Dorothy Small

Possible Hazard Identification: ²⁴ Lead

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: ²⁵

Return to Client ☐ Disposal by Lab ☒ Archive (mos.)

Turnaround Time Required: ²⁶

Normal ☐ Rush ☒ 3 days

QC Level: ²⁷

I. ☐ II. ☐ III. ☒ Project Specific (specify): Navy NFESC Level C

1. Relinquished by ²⁸ Dick Treuter
(Signature/Affiliation) Dick Treuter/IT

Date: 10/5/99
Time: 1230

1. Received by ²⁸
(Signature/Affiliation) [Signature]

Date: 10/5/99
Time: 1230

2. Relinquished by
(Signature/Affiliation)

Date:
Time:

2. Received by
(Signature/Affiliation)

Date:
Time:

3. Relinquished by
(Signature/Affiliation)

Date:
Time:

3. Received by
(Signature/Affiliation)

Date:
Time:

Comments: ²⁹

Fax results to Dick Treuter 410-378-3232

Accutest Laboratories Southeast
Case Narrative

Job (SDG) No.: F5041

Samples: 1

Analysis Performed: Metals

1) Sample Receipt Conformance / Non-Conformance Summary

Custody Seals on Coolers?	Yes <input checked="" type="checkbox"/> ()	No ()
Custody Seals in Tact?	Yes <input checked="" type="checkbox"/> ()	No ()
Chain of Custody Sealed in Plastic?	Yes <input checked="" type="checkbox"/> ()	No ()
Chain of Custody Filled out Properly?	Yes <input checked="" type="checkbox"/> ()	No ()
Enough ice and Packing material?	Yes <input checked="" type="checkbox"/> ()	No ()
All Bottles Sealed?	Yes <input checked="" type="checkbox"/> ()	No ()
Any Bottles Broken?	Yes ()	No <input checked="" type="checkbox"/> ()
Labels in good condition?	Yes <input checked="" type="checkbox"/> ()	No ()
Labels agree with chain of custody?	Yes <input checked="" type="checkbox"/> ()	No ()
Correct Containers Used?	Yes <input checked="" type="checkbox"/> ()	No ()
Preserved Properly?	Yes <input checked="" type="checkbox"/> ()	No ()
Sufficient Sample?	Yes <input checked="" type="checkbox"/> ()	No ()

Comments: _____

000005

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F5041
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1013M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/13/99
Run ID: MA1590

Methods: EPA 200.7, SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	anr							
Calcium	1000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	3.2	<5.0B	1.8	<5.0B	2.5	<5.0B	2.5	<5.0
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F5041
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1013M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/13/99
Run ID: MA1590

Methods: EPA 200.7, SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	anr							
Calcium	1000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	3.2	<5.0B	3.3	<5.0B	3.0	<5.0	3.0	<5.0
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F5041
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1013M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/13/99
Run ID: MA1590

Methods: EPA 200.7, SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB	
			raw	final
Aluminum	200	30	anr	
Antimony	5.0	2.39	anr	
Arsenic	10	3.4	anr	
Barium	200	.39	anr	
Beryllium	5.0	.36	anr	
Cadmium	5.0	.33	anr	
Calcium	1000	19.5	anr	
Chromium	10	.637	anr	
Cobalt	50	.797	anr	
Copper	25	.747	anr	
Iron	300	32	anr	
Lead	5.0	1.59	2.2	<5.0
Magnesium	5000	17.6	anr	
Manganese	15	.16	anr	
Molybdenum	50	.68	anr	
Nickel	40	1	anr	
Potassium	5000	28.2	anr	
Selenium	10	2	anr	
Silver	10	.96	anr	
Sodium	5000	153	anr	
Thallium	10	2.69	anr	
Tin	50	2.2	anr	
Vanadium	50	.717	anr	
Zinc	20	.83	anr	

(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F5041
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2156
 Matrix Type: SOLiD

Methods: SW846 6010A
 Units: mg/kg

Prep Date:

10/13/99

10/13/99

Metal	F5041-1 Original	DUP	RPD	QC Limits	F5041-1 Original MS	Spikelot MPFLICP	% Rec	QC Limits
Aluminum	anr							
Antimony	anr							
Arsenic	anr							
Barium	anr							
Beryllium	anr							
Cadmium	anr							
Calcium	anr							
Chromium	anr							
Cobalt	anr							
Copper	anr							
Iron	anr							
Lead	10.6	11.3	5.8	0-44	10.6	93.0	115.99	71.0 60-127
Magnesium	anr							
Manganese	anr							
Molybdenum	anr							
Nickel	anr							
Potassium	anr							
Selenium	anr							
Silver	anr							
Sodium	anr							
Thallium	anr							
Tin	anr							
Vanadium	anr							
Zinc	anr							

Associated samples MP2156: F5041-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F5041
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2156
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: mg/kg

Prep Date: 10/13/99

Metal	F5041-1 Original MSD	Spikelot MPFLICP	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	10.6	85.0	105.76	70.3 60-127
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Thallium	anr			
Tin				
Vanadium	anr			
Zinc	anr			

Associated samples MP2156: F5041-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F5041
 Account: ITPAMONR - IT Corporation
 Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2156
 Matrix Type: SOLID

Methods: SW846 6010A
 Units: ug/l

Prep Date: 10/13/99

Metal	F5041-1			QC	
	Original	SDL 1.5	RPD	Limits	
Aluminum	anr				
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Cadmium	anr				
Calcium	anr				
Chromium	anr				
Cobalt	anr				
Copper	anr				
Iron	anr				
Lead	99.5	124	25.0	0-10	
Magnesium	anr				
Manganese	anr				
Molybdenum	anr				
Nickel	anr				
Potassium	anr				
Selenium	anr				
Silver	anr				
Sodium	anr				
Thallium	anr				
Tin	anr				
Vanadium	anr				
Zinc	anr				

Associated samples MP2156: F5041-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

OVERVIEW

Two (2) soil samples were analyzed for lead by EPA SW-846 Method 6010. No site-specific Quality Control samples were analyzed. Accutest, located in Orlando, FL, performed the analyses.

SUMMARY

These samples were analyzed successfully.

MAJOR PROBLEMS

No major problems with the validity of the analytical data were found.

MINOR PROBLEMS

- Lead was recovered at greater than the instrument detection limit in the initial and continuing calibration blanks. Sample results with concentrations less than five (5) times the blank concentration are qualified as blank contaminated (B).
- Lead was recovered low in both the matrix spike and matrix spike duplicate samples. The data were qualified low (L).

NOTES

- The low calibration standard for lead was recovered low, although the regular concentration standard was acceptably recovered. Therefore, the data were not qualified.
- The serial dilution had a high relative percent difference. However, since the original sample concentration was less than 50 times the instrument detection limit, the data are not qualified.

REPORT CONTENT STATEMENT

These data were reviewed in accordance with USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses. The text of this report only addresses items that affect the validity of the data contained therein.

ATTACHMENT A

Glossary of Data Qualifiers

Glossary of Data Qualifier Codes

Codes Relating to Identification

(Confidence Concerning Presence or Absence of Compounds)

U = Not Detected. The associated number indicates the approximate sample concentration necessary to be detected.

(No Code) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm the presence or absence in future sampling efforts.

Codes Related to Quantitation

(Can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

Other Codes

Q = No analytical result.

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

ATTACHMENT B

Data Summary Forms

Data Summary Table

1 of 1

Site: FNTC - Bainbridge - Small Arms Ranges Confirmation Results

Lab: Accutest

Reviewer: Michael J. Lacy, Ph.D.

Date: 21 October 1999

Report Number: F5051

Sample I.D.	204-35C2		204-386C1	
Matrix	Soil		Soil	
Units	mg/kg		mg/kg	
Date Sampled	10/11/1999		10/11/1999	
Time Sampled	1510		1515	
% Moisture	18.8		14.3	
pH	N/A		N/A	
Dilution Factor	1.0		1.0	
	Result	VQ	Result	VQ
Lead	7.0	JBL	10.0	JBL

VQ - Validation Qualifier

ATTACHMENT C

Laboratory Reported Results

Report of Analysis

Page 1 of 1

Client Sample ID: 204-35C2

Lah Sample ID: F5051-1

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 10/11/99

Date Received: 10/12/99

Percent Solids: 81.2

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	7.0 B	12.0	mg/kg	1	10/13/99	10/14/99 JK	SW846 6010A

RDL = Reported Detection Limit

000336

Report of Analysis

Page 1 of 1

Client Sample ID: 204-368C1

Lah Sample ID: F5051-2

Matrix: SO - Soil

Project: Bainbridge

Date Sampled: 10/11/99

Date Received: 10/12/99

Percent Solids: 85.7

Metals Analysis

Analyte	Result	RDL	Units	DF	Prep	Analyzed By	Method
Lead	10.0 B	10.9	mg/kg	1	10/13/99	10/14/99 JK	SW846 6010A

RDL = Reported Detection Limit

000009

ATTACHMENT D

Laboratory Reported Tentatively Identified Compounds

(Not Applicable)

ATTACHMENT E

Support Documentation



INTERNATIONAL
TECHNOLOGY
CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 559874
Page 1 of 1

Project Name/No. ¹ Bainbridge 798939 Samples Shipment Date ⁷ 10/11/99
Sample Team Members ² Treater/Klinger Lab Destination ⁸ Accutest Lab
Profit Center No. ³ Lab Contact ⁹ 407-425-6700
Project Manager ⁴ L. Stearns Project Contact/Phone ¹² 410-378-3450
Purchase Order No. ⁶ 798939-007 Carrier/Waybill No. ¹³ FedEx 791801268162
Required Report Date ¹¹ 3 days

Bill to: ⁵ IT Corp.
2790 Mossy Blud
Monroeville, PA 15146
Report to: ¹⁰ Dorothy Small
Larry Stearns
IT Corp.
2790 Mossy Blud
Monroeville, PA 15146

ONE CONTAINER PER LINE

Sample Number ¹⁴	Sample Description/Type ¹⁵	Date/Time Collected ¹⁶	Container Type ¹⁷	Sample Volume ¹⁸	Pre- servative ¹⁹	Requested Testing Program ²⁰	Condition on Receipt ²¹	Disposal Record No. ²²
204-35C2	Comp 3pt Soil Bldg 209 Grid P16	10/11/99 1510	1-803	~603	4°C	Total Lead 6010	FSCSI-1	
204-36BC1	Comp 3pt Soil Bldg 204 Grid P1	10/11/99 1515	1	~303	1	Total Lead 6010	-2	MS/MSD

Special Instructions: ²³ E-mail results to Dorothy Small

Possible Hazard Identification: ²⁴ Lead

Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: ²⁵

Return to Client ☐ Disposal by Lab ☒ Archive ☐ (mos.)

Turnaround Time Required: ²⁶

Normal ☐ Rush ☒ 3 days

QC Level: ²⁷

I. ☐ II. ☐ III. ☒

Project Specific (specify): Mary NFESC Level C

1. Relinquished by ²⁸ Dick Treater
(Signature/Affiliation) Dick Treater

Date: 10/11/99
Time: 1730

1. Received by ²⁸
(Signature/Affiliation) Abby

Date: 10/12/99
Time: 1110

2. Relinquished by
(Signature/Affiliation)

Date:
Time:

2. Received by
(Signature/Affiliation)

Date:
Time:

3. Relinquished by
(Signature/Affiliation)

Date:
Time:

3. Received by
(Signature/Affiliation)

Date:
Time:

Comments: ²⁹

Fax results to Dick Treater
410-378-3232

Vertical text on right margin

Yellow: Hand copy

See back of form for special instructions.

Accutest Laboratories Southeast
Case Narrative

Job (SDG) No.: F5051

Samples: 1-2

Analysis Performed: Metals

1) Sample Receipt Conformance / Non-Conformance Summary

Custody Seals on Coolers?	Yes (✓)	No ()
Custody Seals in Tact?	Yes (✓)	No ()
Chain of Custody Sealed in Plastic?	Yes (✓)	No ()
Chain of Custody Filled out Properly?	Yes (✓)	No ()
Enough ice and Packing material?	Yes (✓)	No ()
All Bottles Sealed?	Yes (✓)	No ()
Any Bottles Broken?	Yes ()	No (✓)
Labels in good condition?	Yes (✓)	No ()
Labels agree with chain of custody?	Yes (✓)	No ()
Correct Containers Used?	Yes (✓)	No ()
Preserved Properly?	Yes (✓)	No ()
Sufficient Sample?	Yes (✓)	No ()

Comments: _____

000000

Accutest Laboratories Southeast
Case Narrative

3) **Metals Conformance / Non-conformance Summary**

Blank level below reporting limits?

Yes ☒ ()

No ()

If no, list analytes above reporting limits: _____

Spike blank (LCS) data within acceptable Limits?

Yes ☒ ()

No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

Matrix spike data within acceptable limits?

Yes ☒ ()

No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

Matrix duplicate data within acceptable limits?

Yes ☒ ()

No ()

If no, list analytes outside of acceptable limits. Refer to QC summary for additional Comments: _____

Samples prepared and analyzed within holding time?

Yes ☒ ()

No ()

If holding times were not met, list analytes where holding times were exceeded and explain: _____

All analytical criteria met (calibration, CCV, ICV, CCB, etc.)?

Yes ☒ ()

No ()

If not met, list effected samples and analytes: _____

Comments: _____

000007

INITIAL CALIBRATION VERIFICATION SUMMARY

MET.02

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F5051
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1014M1.ASC
QC Limits: 70 to 130 % Recovery

Date Analyzed: 10/14/99
Run ID: MA1591

Methods: EPA 200.7, SW846 6010A
Units: ug/l

Metal	CRI True	CRIA True	CRIA Results	% Rec	CRI Results	% Rec
Aluminum	200					
Antimony		5.0	anr			
Arsenic		10	anr			
Barium	200					
Beryllium	5.0					
Cadmium	5.0					
Calcium	1000					
Chromium	10					
Cobalt	50					
Copper	25					
Iron	300					
Lead		10	7.7	77.0		
Magnesium	5000					
Manganese	15					
Molybdenum	50					
Nickel	40					
Potassium	5000					
Selenium		10	anr			
Silver	10					
Sodium	5000					
Thallium		10	anr			
Tin	50					
Vanadium	50					
Zinc	20					

(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F5051
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2158
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date:

10/13/99

10/13/99

Metal	F5051-1 Original MS	Spikelot MPFLICP	% Rec	QC Limits	F5051-1 Original DUP	RPD	QC Limits		
Aluminum	anr								
Antimony	anr								
Arsenic	anr								
Barium	anr								
Beryllium	anr								
Cadmium	anr								
Calcium	anr								
Chromium	anr								
Cobalt	anr								
Copper	anr								
Iron	anr								
Lead	7.0	97.2	120.74	74.7	60-127	7.0	7.2	3.9	0-44
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Potassium	anr								
Selenium	anr								
Silver	anr								
Sodium	anr								
Thallium	anr								
Tin									
Vanadium	anr								
Zinc	anr								

Associated samples MP2158: F5051-1, F5051-2

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F5051
Account: ITPAMONK - IT Corporation
Project: ITPAMONR1597 - Bainbridge

QC Batch ID: MP2158
Matrix Type: SOLID

Methods: SW846 6010A
Units: mg/kg

Prep Date: 10/13/99

Metal	F5051-1 Original MSD	Spikelot MPFLICP	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Cadmium	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	7.0	99.5	124.4	74.4 60-127
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium	anr			
Selenium	anr			
Silver	anr			
Sodium	anr			
Thallium	anr			
Tin				
Vanadium	anr			
Zinc	anr			

Associated samples MP2158: F5051-1, F5051-2

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F5051
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1014M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/14/99
Run ID: MA1591

Methods: EPA 200.7, SW846 6010A
Units: ug/l

Metal	RDL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	anr							
Calcium	1000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	1.8	<5.0B	1.1	<5.0	2.4	<5.0B	1.7	<5.0B
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: FS051
Account: ITPAMONM IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1014M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/14/99
Run ID: MA1591

Methods: EPA 200.7, SW846 6010A
Units: ug/l

Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr							
Antimony	5.0	2.39	anr							
Arsenic	10	3.4	anr							
Barium	200	.39	anr							
Beryllium	5.0	.36	anr							
Cadmium	5.0	.33	anr							
Calcium	1000	19.5	anr							
Chromium	10	.637	anr							
Cobalt	50	.797	anr							
Copper	25	.747	anr							
Iron	300	32	anr							
Lead	5.0	1.59	1.7	<5.0B	2.3	<5.0B	1.8	<5.0	2.0	<5.0
Magnesium	5000	17.6	anr							
Manganese	15	.16	anr							
Molybdenum	50	.68	anr							
Nickel	40	1	anr							
Potassium	5000	28.2	anr							
Selenium	10	2	anr							
Silver	10	.96	anr							
Sodium	5000	153	anr							
Thallium	10	2.69	anr							
Tin	50	2.2	anr							
Vanadium	50	.717	anr							
Zinc	20	.83	anr							

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F5051
Account: ITPAMONR - IT Corporation
Project: ITPAMONR1597 - Bainbridge

File ID: IR1014M1.ASC
QC Limits: result < RDL

Date Analyzed: 10/14/99
Run ID: MA1591

Methods: EPA 200.7, SW846 6010A
Units: ug/l

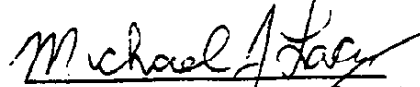
Metal	RDL	IDL	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	30	anr					
Antimony	5.0	2.39	anr					
Arsenic	10	3.4	anr					
Barium	200	.39	anr					
Beryllium	5.0	.36	anr					
Cadmium	5.0	.33	anr					
Calcium	1000	19.5	anr					
Chromium	10	.637	anr					
Cobalt	50	.797	anr					
Copper	25	.747	anr					
Iron	300	32	anr					
Lead	5.0	1.59	-0.80	<5.0	2.5	<5.0B	7.5	(a)
Magnesium	5000	17.6	anr					
Manganese	15	.16	anr					
Molybdenum	50	.68	anr					
Nickel	40	1	anr					
Potassium	5000	28.2	anr					
Selenium	10	2	anr					
Silver	10	.96	anr					
Sodium	5000	153	anr					
Thallium	10	2.69	anr					
Tin	50	2.2	anr					
Vanadium	50	.717	anr					
Zinc	20	.83	anr					

(*) Outside of QC limits
(anr) Analyte not requested
(a) Bracketing soil samples. Higher DL used.

DATE: December 01, 1999

SUBJECT: Data Validation for
Former Naval Training Center-Bainbridge
Port Deposit, Maryland

FROM: Michael J. Lacy, Ph.D.

A handwritten signature in cursive script that reads "Michael J. Lacy". The signature is written in dark ink and is positioned above the printed name and title.

Field Analytical Services Manager
IT Corporation – Trenton, New Jersey

TO: Mary Cooke – Project Contact
Hazardous Site Cleanup Division, 3HS13

OVERVIEW

Two (2) soil samples were analyzed for lead by EPA SW-846 Method 6010. No site-specific Quality Control samples were analyzed. Analytical Laboratory Services, located in Middletown, PA, performed the analyses.

SUMMARY

The samples were analyzed successfully.

MAJOR PROBLEMS

No major problems with the validity of the analytical data were found.

MINOR PROBLEMS

- The sample and duplicate results differed by more than 20 percent. All lead results should be qualified estimated (J).

NOTES

There are no notes associated with this Data Validation Report.

REPORT CONTENT STATEMENT

These data were reviewed in accordance USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses. The text of this report only addresses items that affect the validity of the data contained therein.

ATTACHMENT A

Glossary of Data Qualifiers

Glossary of Data Qualifier Codes

Codes Relating to Identification

(Confidence Concerning Presence or Absence of Compounds)

U = Not Detected. The associated number indicates the approximate sample concentration necessary to be detected.

(No Code) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm the presence or absence in future sampling efforts.

Codes Related to Quantitation

(Can be used for both positive results and sample quantitation limits)

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

Other Codes

Q = No analytical result.

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

ATTACHMENT B

Data Summary Forms

Data Summary Table

Site: FNTC - Bainbridge - Water Tower at Buildings 689 & 1054 Confirmation Results
 Lab: Analytical Laboratory Services
 Reviewer: Michael J. Lacy, Ph.D.
 Date: 01 December 1999
 Report Number: OBT-031

1 of 1

Sample I.D.	Bain689SWCon		Bain689SW1Con	
Matrix	Soil		Soil	
Units	mg/kg		mg/kg	
Date Sampled	12/22/98		12/22/98	
Time Sampled	1400		1410	
% Moisture	12.4		11.1	
pH	N/A		N/A	
Dilution Factor	1.0		1.0	
	Result	VQ	Result	VQ
Lead	34	J	31	J

VQ - Validation Qualifier

ATTACHMENT C

Laboratory Reported Results



**ANALYTICAL
LABORATORY SERVICES, INC.**

Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 1
Sample # U25216-1

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

January 6, 1999

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: 03562-LS-BB	Date Sampled	: 12/22/98 02:00 PM
Location	: BAIN 689 SW CON	Date Received	: 12/23/98
Sample State	: Soil Composite	Date Approved	: 01/06/99
Collector	: DB	Discard Date	:

TEST/PARAMETER	RESULT	UNITS	REPORTING LIMIT	METHOD
METALS				
TOTAL METALS BY ICP				
Lead	30	mg/kg	10	6010B
Lead	34	mg/kg	Dry Weight	

WATER QUALITY	RESULT	UNITS	REPORTING LIMIT	METHOD
Total Solids	87.6	%	0.1	3540B

DATA PACKAGES
DATA PACKAGE NFESC Lev C

This report relates only to the samples as received by the laboratory, and may only be reproduced in full.

**** Continued ****

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**ANALYTICAL
LABORATORY SERVICES, INC.**

Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 2
Sample # U25216-1

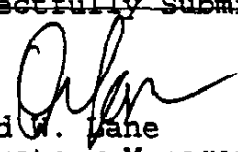
January 6, 1999

QUALITY ASSURANCE REPORT

Q/A PARAMETER	RESULT		
METALS			
TOTAL METALS BY ICP			
Lead	95	% Recovery	Spike
Lead	88	% Recovery	Spike
WATER QUALITY			
Total Solids	87.9	%	Duplicate

TEST/PARAMETER	PRESERVATIVE	TECH	ANALYSIS	
			DATE	TIME
TOTAL METALS BY ICP	See Chain of Custody	JBH	01/06/99	15:17
50B Digestion for Metals		JWK	12/30/98	
Total Solids	See Chain of Custody	PAM	12/31/98	11:35
DATA PACKAGE		SMD	12/30/98	

Respectfully Submitted,


David W. Lane
Laboratory Manager

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**ANALYTICAL
LABORATORY SERVICES, INC.**

Environmental ♦ Industrial Hygiene ♦ Food Science

Page # 1
Sample # U25216-2

ATTN: Mr. Mike Lacey
OHM REMEDIATION SERVICES CORP
200 HORIZON CENTER
TRENTON NJ 08691

January 6, 1999

LAB ANALYSIS REPORT

Job Name	: Bainbridge NTC	Customer PO#	:
Job Number	: 03562-LS-BB	Date Sampled	: 12/22/98 02:10 PM
Location	: BAIN 689 SW-1 CON	Date Received	: 12/23/98
Sample State	: Soil Composite	Date Approved	: 01/06/99
Collector	: DB	Discard Date	:

<u>TEST/PARAMETER</u>	<u>RESULT</u>	<u>UNITS</u>	<u>REPORTING LIMIT</u>	<u>METHOD</u>
METALS				
TOTAL METALS BY ICP				
Lead	28	mg/kg	0 100	6010B
Lead	31	mg/kg	Dry Weight	

<u>TEST/PARAMETER</u>	<u>RESULT</u>	<u>UNITS</u>	<u>REPORTING LIMIT</u>	<u>METHOD</u>
WATER QUALITY				
Total Solids	88.9	%	0.1	3540B

DATA PACKAGES
DATA PACKAGE NFESC Lev C

The lack of homogeneity in the sample caused the analysis of the analytes to exceed 20% relative standard difference for total metal analysis.

**** Continued ****

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ATTACHMENT D

Laboratory Reported Tentatively Identified Compounds

(Not Applicable)

ATTACHMENT E

Support Documentation



625281

LAB COPY
Form 0019
Field Technical Services
Rev. 08/89

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O.H. MATERIALS CORP.			P.O. BOX 551			FINDLAY, OH 45839-0551			419-423-3526		
PROJECT NAME				PROJECT LOCATION				ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS)			
PROJ. NO.		PROJECT CONTACT		PROJECT TELEPHONE NO.		NUMBER OF CONTAINERS		<div style="text-align: center;"> <div>12/24/44</div> <div>2-5210</div> <div> <div>100% PARTICLES</div> <div>100% LEAD</div> </div> </div>			
CLIENT'S REPRESENTATIVE				PROJECT MANAGER/SUPERVISOR							
FRANK ZEPKA				LARRY STERBOS / CHAZ CRENSHAW							
ITEM NO	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE DESCRIPTION (INCLUDE MATRIX AND POINT OF SAMPLE)				REMARKS	
1	BANB651-EP-2	12/10/13	1345	X		brown soil 2 pt composite of soil under asphalt		1.4m	X		to see if pesticides are under asphalt
2	BANB653-SW-3	12/10/13	1355	X		brown soil 2 pt composite of soil under asphalt		1.4m	X		pos. for pesticides in sediment in hp.
3	BANB653-CB-2	12/10/13	1412	X		brown soil 2 pt composite of soil under asphalt		1.4m	X		kit results between std 1 and std 2
4	BANB654-SW-CB	12/22/13	1400	X		brown soil AFTER 1st EXCAVATION 6 pt composite from water tower base		1.8m	X		
5	BANB654-SW-1-CW	12/22/13	1410	X		brown soil AFTER 1st EXCAVATION 3 pt composite from water tower base		1.8m	X		
6											
7											
8											
9											
10											

12/27/13
 [Signature]

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
000003	1-5	[Signature]	[Signature]	11/22/15		7 DAY TAT please fax results to M. Lacy 609 580 6400 and D. Burkett 410 378 3232 please mail hard copy to Mike Lacy c/o OHM 200 HERRON CENTER TRENTON NJ 08691
	1-5	[Signature]	[Signature]	12/23/15		
						SAMPLER'S SIGNATURE [Signature]

72000/163981.58

Analytical Laboratory Services Inc.
Analytical Narrative
OHM/IT-Bainbridge NTC
OBT-001

SAMPLE MANAGMENT

This report contains the results of the analysis of five (5) soil samples collected on December 18 and 22, 1998. Analytical results and quality control information are summarized in this data package. The samples were analyzed as follows:

LAB ID	LOCATION	LEAD	PESTICIDES	TOTAL SOLIDS
U25211-1	BAIN 683 E8-2		*	*
U25211-2	BAIN 683 D6-3		*	*
U25211-3	BAIN 683 C6-2		*	*
U25216-1	BAIN 689 SW CON	*		*
U25216-2	BAIN 689 SW-1 CON	*		*

SAMPLE RECEIPT

Samples arrived at ALSI via laboratory courier on December 23, 1998. Upon receipt, the samples were inspected and compared to the enclosed chain of custody. Cooler receipt forms were filled out for the samples received. All sample bottles were preserved properly. Each sample was assigned a unique identification number (see above table). The sample information was entered into the computer system and the samples were released for analysis.

PESTICIDES BY 8081A

Samples. Three (3) samples were extracted by method 3550B, sonication extraction on December 28, 1998. Sample interferences were removed from samples BAIN 683 E8-2 and BAIN 683 D6-3 by clean-up with Method 3620C, Flurisol Clean-Up on December 28, 1998. Sample extracts were analyzed by Method 8081A. All sample handling and analysis was completed within holding time.

Blanks. The method blank associated with the 8081A samples in this deliverable group is PP457Y-1. There were no detections in the method blank. The method blank summary form is enclosed.

Calibration. The initial calibration was conducted on December 30, 1998. A standard prepared from a source different from the initial calibration was analyzed immediately

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following the initial calibration. Results were acceptable. Continuing calibration checks were above acceptable limits for heptachlor, but all samples were nondetectable for this analyte. Therefore per method requirements, samples were not re-analyzed.

Surrogates. Surrogate recovery forms are enclosed. Surrogate recoveries were acceptable for the samples in this deliverable group.

LCS. PP457Y-1LCS is the laboratory control sample extracted with the samples in this group. The appropriate summary form is enclosed. All recoveries were acceptable.

Matrix Spike. BAIN683D6-3 was spiked in duplicate. Acceptable precision and accuracy were observed. The appropriate summary form is enclosed.

Detections. 4,4'-DDT, 4,4'-DDE, and 4,4'-DDD were tentatively identified on the primary column (RTX-5) in BAIN683E8-2 and BAIN683C6-2. Qualitative verification was provided on a second column of dissimilar phase (RTX-CLPest).

Interferences. The sample extracts were analyzed at a dilution in the pesticides analysis due to sample matrix.

Miscellaneous. A sample reporting error was detected in sample BAIN 683 E8-2 upon assembly of the data package. A modified laboratory analysis report is included in the package.

TOTAL METALS BY ICP by SW-846 Method 6010B

Sample handling. Two (2) soil samples were digested by SW-846 Method 3050B. Digestates were analyzed for metals by Spectro D ICP, using SW-846 Method 6010B. The samples were digested and analyzed within the six month holding time established for this method.

Calibration. Method calibrations are performed every six months according to instrument manufacturer's standards. A high standard and a blank are run daily. In addition, second source continuing calibration standards are analyzed to verify the calibration. The laboratory control sample (LCS), identified as LSD0845-1, was digested and analyzed with this batch of samples. The LCS was within the acceptable limits of 75-125% for lead.

Blanks. The method blank, identified as SD0845-1, was digested and analyzed. No metals were detected in the blank.

Spikes. A matrix spike / matrix spike duplicate analysis was performed on sample U25216-1. The matrix spike and matrix spike duplicate recoveries were within acceptable limits of 75-125% for lead.

Duplicates. A prep duplicate was performed on sample U25216-2. The relative percent difference (RPD) between the sample and the duplicate was not within the required 20% for lead. The sample and sample duplicate had a high percent difference (22%), and a comment was added to the lab report. This is likely due to the sample matrix.

Total Solids by SM 3540B

Sample handling. Five (5) samples were analyzed for total solids by SM 3540B.

Duplicates. A duplicate analysis was performed on sample BAIN 689 SW CON. The relative percent difference was within 5%, the acceptable limit.

Analysis Method: 6010B

SDG No.: OBT-001

Matrix (soil/water): Soil

Lab Sample ID: U25216-2

Units: mg/kg

Lab File ID: 10699

Instrument ID: SPECTRO D ICP

Lab Sample Dup. ID: U25216-2D

GC Column: NA

Dup. Lab File ID: 10699

Sample % Moisture: NA

Dup. % Moisture: NA

[illegible]

* : Values outside of acceptable limits

Comments: